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Nine conference papers consider the application of knowledge and methods known to special education to the instruction of disadvantaged children. Edmund W. Gordon views the disadvantaged population; Frank B. Wilderson discusses behavior disorders in children from deprived backgrounds; Harriet Green Kopp describes problems of perception and cognition among the disadvantaged; and James J. Gallagher treats the disadvantaged gifted. Also presented are the contributions of special education programs, for the following groups, to the instruction of the disadvantaged: children with learning disabilities, by Norris G. Haring and Patricia Nolen; the mentally retarded, by Wayne L. Sengstock; children with orthopedic handicaps or health impairment, by Dorothy B. Carr; and the visually handicapped by Samuel C. Ashcroft. In addition, Mamie J. Jones assesses the contributions of speech therapy. (JD)

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SPECIAL EDUCATION AND PROGRAMS FOR DISADVANTAGED CHILDREN AND YOUTH

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THE COUNCIL FOR EXCEPTIONAL CHILDREN
Washington, D.C.

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The conference was designed to present the application of knowledge and methods known to special education to the instruction of disadvantaged children. CEC gratefully acknowledges the efforts of those who presented these papers.

The conference was enriched by the presentation of papers by reactors. The reactors were Robert J. Havighurst, James O. Smith, Madge Leslie, Ray Barsch, William C. Rhodes, Hugo F. Schunoff, and Ruth B. Irwin. However, the reactor papers could not be included because of the need for keeping the present volume to a practical size. The Appendix indicates the conference planning committee and participants.

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INTRODUCTION

ABRAHAM J. TANNENBAUM

Ideas for closing the educational gap between the socially advantaged and disadvantaged are polarized around two points of view. One draws attention to the inadequacies of ghetto schools and their staffs while the other focuses on the inadequacies of the target population.

Adherents to the first set of orientations argue that schools know how to educate the underprivileged successfully but are not really eager to exercise their knowhow. They allegedly fall far short of expectations because of (a) bureaucratic inertia in a smug, tenured, administrative complex; (b) substandard learning conditions, instructional materials, and professional resources; (c) widespread indifference and occasional hostility toward pupils from minority groups; and (d) a false belief that such children cannot achieve any better than they do. These critics contend that slum children do not suffer from deeply rooted learning deficits comparable to handicapped pupils traditionally assigned to special education programs. Instead, their intellective, motivational and behavioral equipment is basically normal, and they could compete with children from "the other side of the tracks" if they were given half a chance. They do not need any special compensatory programs; in fact, these programs have the reverse effect of further stigmatizing them as innately inferior. What they do need are school atmospheres that inspire learning, created by professional educators who believe underprivileged children can learn, who want to teach them, and who know how to get the job done. Schools can perform their function, provided they do not exacerbate or pander to the social degradation, poverty, and powerlessness that afflict the underprivileged. According to this point of view, the fundamental problem is that of social inequality, not intellectual deficit.

The second approach takes children as they come and is deeply committed to special corrective measures where conventional instruction fails. Without minimizing the deprivational effects of a poor home and community environment, this approach concentrates primarily on the manifest nature of human deviance, not its origins. If the child's presenting problem is academic retardation, the teacher pursues only those related deficits that can be accommodated in an instructional treatment model. She has no illusions that quality instruction through an attack on symptoms rather than etiologies will bring about some kind of social reform, for, after all, her influence is restricted by the institutional limitations of the school. It cannot remove the sociocultural inhibitors of educational success among the underprivileged any more than it can rectify the hereditary and congenital factors that stunt achievement growth among other handicapped children. All it can ever hope to do is facilitate, enrich, direct, and redirect the pupils' absorption of skills, concepts, attitudes, and behaviors by formal teaching-learning processes. This means that the teacher's methodology is analogous to that of behavior therapy, in contrast to the depth analysis of insight therapy or the environmental management of sociotherapy. She leans heavily toward differential diagnosis of present functioning and tailors intervention to existing deficit profiles, without involving herself much in the search for experiential antecedents or social determinants of behavior.

Educators who follow the second of the two approaches to educational intervention in depressed areas would naturally look for help from those trained to diagnose learning deficits and plan appropriate remediation. That is precisely the stock in trade of the teacher of the handicapped. What she is expected to offer is not simply slower paced conventional teaching or a watered down version of psychotherapy, but rather prescriptive instruction designed to accommodate individual differences in school performance. It is, therefore, entirely appropriate to canvass specialists in special education for some points of relevance between their unique expertise and the needs of the socially disadvantaged. Publication of the papers in this monograph resulted from one of the earliest formal efforts of this kind. The contributors were invited by The Council for Exceptional Children to make their presentations at a special invitational conference of educators of the handicapped. It was not possible to record the discussions stimulated by the papers, but all participants operated under the caveat that special education's "state of the art" is still quite primitive. There is no definitive evidence that the field is in a position to make dramatic headway with its traditional target populations, much less suggest methods of alleviating the educational plight of the underprivileged.

The participants acknowledged that all they could offer at this point are some promising hypotheses based on work with the physically, mentally, and emotionally deviant. In so doing, they touched on several key issues that are relatively neglected in studies of the socially disadvantaged.

One of the valuable lessons educators of the handicapped have learned and can teach others is that it is important to appreciate the heterogeneity among children suffering from what seem to be similar handicaps. This helps lay the groundwork for adjusting instructional strategies to cognitive and behavioral individualities. Unfortunately, there is no comparable fine differentiation made in studies devoted exclusively to the socially disadvantaged. Diverse impoverished groups are often lumped together under interchangeable labels that make them appear as though they were homogeneous. Educators tend to overgeneralize about the life styles of these groups and to blur individual differences, perhaps because the search for differences betrays some kind of assumption of inequality which the target population may resent bitterly. However, with its emphasis on human variability, even within each category of handicap, special education can stimulate long overdue studies in intraclass differences as well as variations between caste and class. It can help focus on the ways in which various ethnic groups relegated to positions of low prestige in our society vary widely in the ways they perceive themselves and the world around them. Some of this subgroup variability may suggest the kinds of differentiation needed in comprehensive social rehabilitation programs for the underprivileged, just as the endogenous and exogenous typologies of learning handicap point the way to dissimilar educational provisions for slow learners.

In dealing almost exclusively with symptomatology, there is always the danger of being misled into making false generalizations on the basis of manifest similarities. For example, many underprivileged children show signs of neurological impairment by virtue of the facts that they are hyperactive, they seem unable to restrict their focus to essential stimuli, they act immaturely, and they have distorted self concepts. However, to label an underprivileged child "brain injured" on the basis of his behavior alone amounts to extrapolating cause from effect and does not add to an understanding of his developmental history. Nevertheless, while the etiologies of school failure among so called exceptional children are fundamentally unlike those among so called underprivileged children, there is still much of value that the specialist in special education can suggest to those concerned with quality instruction in ghetto schools. For even if the causes of inadequacy are not the same, the effects on school performance are, and the teacher's only armament for counteracting these effects are her instructional methods and materials.

CHAPTER 1: A VIEW OF THE TARGET POPULATION

EDMUND W. GORDON

Although the literature on the disadvantaged is extensive, we have not yet had a major breakthrough with definitive findings upon which to base educational intervention. This may be due, in part, to the fact that the problems of underdevelopment and educational handicaps in the disadvantaged have not been appropriately conceptualized. The great majority of investigators who have worked in this field have viewed the disadvantaged as a great homogeneous mass. Insufficient attention has been given to the wide variety of persons, conditions, problems, and potential assets which are represented by this all too popular euphemism, "the disadvantaged."

Definition and Characteristics of the Disadvantaged

The term "socially disadvantaged" refers to a group of populations which differ from each other in a number of ways but have in common such characteristics as low economic status, low social status, low educational achievement, tenuous or no employment, limited participation in community organizations, and limited ready potential for upward mobility. Variously referred to as the "culturally deprived," the "socioeconomically deprived," the "chronically poor," the "poverty stricken," the "culturally alienated," and so on, these are people who are handicapped by depressed social and economic status and, in too many instances, are further handicapped by ethnic and cultural caste status. For a number of interrelated reasons, more and more of these families are coming to be concentrated in the decaying hearts of our great metropolitan centers. Predominantly Negro, Puerto Rican, Mexican, American Indian, southern rural white, or mountain white bear cultural attitudes alien to those dominant in the broader community, and their children come to the school disadvantaged to the degree that their culture has failed to provide them with the experiences normal to the kinds of children the schools are used to teaching.

As a consequence, these children show in school disproportionately high rates of social maladjustment, behavioral disturbance, physical disability, academic retardation, and mental subnormality. Such problems are acute wherever they are found, but they have been exacerbated and brought to the focal point of public attention because of the recent increasing concentration of this population in the center city and because of increasing pressure on the school to maintain and insure the academic success of these children in the public school.

A Conceptual Model for Teaching the Disadvantaged

Approaching this population and the literature related to it as an educational challenge rather than as a political problem, one is led to a three unit conceptual model for approaching the pedagogical tasks involved. The teaching-learning process for any learner involves:

1. The nature, quality, and functional patterning of basic cognitive processes (sensation, perception, cognition, association, generalization, memory, thinking or problem solving, and information processing).
2. The nature, quality, and functional patterning of affective mechanisms (attitude, aspiration, motivation, involvement, receptor readiness and preference, set, and temperament).
3. The nature, quality, and functional patterning of achievement systems (skills mastery, content mastery, and informational and behavioral repertoire acquisition).

Although the literature treats aspects of this model, what is missing is systematic attention to the three aspects or units in their dialectical relationship to each other.

Some of these children have problems because their basic cognitive processes are defective or disordered.

Some of these youngsters have major disturbances in affect, or their affective behavior may be guided by the beat of another drummer.

Some of these youngsters simply have deficiencies in the mastery of basic skills.

Still others suffer from significant information gaps—certain content is not in their information pool.

But these developmental learning disturbances do not operate unilaterally. They interact, interpenetrate, and overlap. Additionally, temporal and sequential ordering and disordering combine to further complicate the picture. Thus, when we try to look at intelligence or personality or achievement factors—as is typical of much of the literature—we get findings that sound intelligent but are frequently unintelligible, or at least are close to being meaningless as guides to educational planning.

Intelligence Measurement

What does it mean when we say that we know a great deal about the intellectual status of disadvantaged children? It simply means that we know that children from socially disadvantaged backgrounds tend to make lower scores on standard tests of intelligence than do children from more privileged backgrounds. Since we know that these tests tend to correlate with success in school, those children with lower scores are likely to do poorly in school.

Much of the research in this area has been concerned with the determination of relationships between intelligence and socioeconomic status or intelligence and ethnic status (Clark and Clark, 1953; Deutsch and Brown, 1964; Dreger and Miller, 1960; Eells, 1953; Higgins and Sivers, 1958; Montague, 1964; Osborne, 1960). These reports consistently show that higher income and higher social or ethnic status positively correlate with higher intellectual status. These relationships, however, are not viewed as permanent or irreversible as was previously thought. Despite prominent stylistic differences in patterns of intellectual function observed in children of different ethnic and social groups reported by Lesser (1967), Deutsch (1963) noted that class differences in perceptual abilities decrease with age; Eells (1953), writing in the context of his concern with the cultural bias of intelligence tests, noted that children from deprived backgrounds often receive scores which are inaccurate reflections of their basic intelligence. The necessity for examining the subcultural values of the child tested has been pointed out by Levinson (1961). Deutsch and Brown (1964) found that the influence of race became increasingly manifest and crucial as social level increased. Pasamanick and Knobloch (1955) noted that awareness of the examiner's skin color caused sufficient inhibition to result in decreased verbal responsiveness and thus poorer performance on language sections of intelligence tests. Intelligence level has also been described as a function of the amount of material available for learning and the types of learning which take place (McCandless, 1952). Some investigators have characterized the lower class child as weak in conceptual ability (Siller, 1957). More psychomotor and behavioral disorders and greater reading disability were found in the deprived population than in more privileged groups by Pasamanick and Knobloch (1958). The findings by Pasamanick and Knobloch (1958), which are based upon the study of relationships between income levels, health status, and school adjustment, suggest a continuum of reproductive errors. The incidence of reproductive error or developmental defect occurs along a continuum in which the incidence of error is greatest in the population for which medical, nutritional, and child care are poorest, and least where such care is best. Now this formulation, when applied to the question of possible social, class, or racial difference in intelligence, has led to the general feeling that racial IQ differences are a result of environmental deprivation rather than of inherent limited potential. In the definitive review of this problem, Klineberg (1963) found no scientifically acceptable evidence for the view that ethnic groups differ in innate ability.

Hunt (1961) has advanced and provided considerable support for the position that intelligence is not primarily a genetically determined phenomenon, but rather is a function which develops in and through the process of interaction with the environment. This position is reflected in much of the work on intellectual function in disadvantaged populations. Since many studies show differential function favoring more advantaged groups, much effort has been directed at establishing evidence of social experience determinants of these differences.

Considerable attention has been given to the nature of intelligence tests and the conditions under which such tests are administered. Earlier efforts at the development of culture free tests of intelligence have been replaced by effort directed at the development of culture fair tests—tests of intelligence which include items drawn from the cultural experience backgrounds of a wider variety of subjects. This concern with culture fair instruments, however, is best limited to studies in which comparisons between groups of subjects are the principal focus. In studies where concern is focused upon the extent to which individuals or groups approach the criterion measures standard in academic circles in this country, culture fair tests tend to lose their predictive value. In this context, the standard tests of intelligence are more commonly and appropriately used. Deutsch, Fishman, Kogan, North, and Whiteman (1964) have given extensive treatment to these issues in their article on testing minority groups. Following an examination of some of the implications of our knowledge of the measurement of intelligence, Lesser and Stodolsky (1967) have concluded:

> Intelligence tests must now be thought of as samples of learning based on general experiences. A child's score may be thought of as an indication of the richness of the milieu in which he functions and the extent to which he has been able to profit from that milieu. In contradistinction, school-achievement tests assume deliberate instruction oriented to the outcomes measured in the tests [p. 47].

While we are able to state at any point in the child's career that he has achieved a certain level of intellectual or academic function, we are still unable to say much about the relationship between the two. Even worse, we are forced to ignore the intellective processes and affective mechanisms which have permitted or precluded achievement.

There is then an extensive literature on differences in intelligence test performance between Negroes and whites, between whites and other minority groups, and between social classes. It is sufficient for our purposes simply to state that the findings consistently favor higher status groups, whether that status is based on income or ethnic origin. However, the economic and class factors greatly contaminate these data, making it extremely difficult to treat ethnic origin definitively. Two findings are of particular interest. In minority group versus white group comparisons on standard tests, whites consistently come out with higher scores except when compared to orientals who, in several studies, have earned scores equal to whites and who, in a study of preschool functional level, equaled whites on verbal materials and surpassed comparable white children on nonverbal tests. A second group of findings of interest involve comparisons by social class and ethnic group in laboratory learning situations.

In several studies involving laboratory learning or new learning situations, we find a marked absence of differences in the quality of such learning task mastery between different economic or ethnic groups. The relationship between tested intelligence and performance on these new learning or laboratory learning tasks is high for upper status groups, but negligible for lower status groups. These findings suggest that the tests are reasonably adequate measures of quality of intellectual function in upper status children, but are poor measures of quality of intellectual potential in less privileged youngsters. When both groups are confronted with learning situations which are not heavily dependent upon richness of previous learning experience, differences in achievement on these learning tasks are greatly reduced. Likewise, for youngsters who are exposed to standardized tests, which to a large extent duplicate performance tasks with which they have had some experience, correlations between performance in the two situations by youngters to whom such experiences have been common are high. When youngsters who have been deprived of those "standard" experiences which tend to be tapped in our standardized tests are subjected to such test situations, we see marked differences between their performance in such situations and their performance in new or laboratory learning tasks.

I have given very superficial coverage here to the extensive literature on intelligence and achievement measures for disadvantaged children. But in depth analysis is not needed to make the point. Available research in this area permits the description of certain measured levels of function in relation to some reference group, but it does not permit us to understand the processes involved. Indeed, there is even some evidence to suggest that the descriptions of levels of function are misleading, since they may be too narrowly drawn. However, what is emerging from the careful analysis of this research is the clear impression that static measures of function or status are inadequate in dealing with disadvantaged children. Appraisal procedures, which permit us to get at process-mechanism-interactions, are needed, for it is out of process analysis and interactional studies that we are more likely to get meaningful leads for intervention.

Affective Development

It is interesting that although we have less research related to the affective development and behavior of the disadvantaged, the literature seems somewhat clearer. It may be the result of the fact that we have been forced to describe rather than quantify, and in the absence of precision or allegedly accurate measures we have been less prone to make predictions and take recalcitrant positions. Zigler (1966), in discussing the triadic model for getting at the learning problems of the disadvantaged, has suggested that the affective area involving attitudes and motivations may not only be more plastic and amenable to modification than cognitive processes or achievement systems, but may indeed be more crucial. He takes the position that shifts in quality of function may be more a function of attitude toward the task, motivation, and task involvement than difference in cognitive function.

The literature on affective development indicates that many of the children with whom we are concerned show a marked lack of involvement with, attention to, and concentration on the content of their academic experiences. There are few academic tasks which commit them to deep involvement. Their work habits are frequently insufficiently developed. Because of the high interest demands of nonacademic experiences, they are limited in their ability to inhibit responses to those stimuli which are extraneous to academic learning and to disinhibit responses which are pertinent to academic learning. Deutsch (1965) reported that lower class children tend to ignore difficult problems with a "so what" attitude and, as a result, over a period of time their learning is decreased proportionately. Ausubel (1964) found that lower class children depend more on external as opposed to internal control than do children from the middle class.

Moreover, socially disadvantaged children have been determined by several investigators to be less highly motivated and to have lower aspiration for academic and vocational achievement than their middle and upper class school peers. The degree of motivation and the direction which it takes among many of these children are often inconsistent with both the demands and the goals of formal education. But although the quality of aspiration is often depressed, it is usually consistent with the child's perception of the opportunities and rewards available to him. Symbolic rewards and postponements of gratification appear to have little value as positive motivators of achievement. For these children, goals tend to be self centered, immediate, and utilitarian, as are the goals of the dominant culture. However, children growing up under more privileged circumstances have available many sources of immediate satisfaction and immediate feedback, as well as many more evidences of the utilitarian value of academic effort. The differences between the privileged and the underprivileged are not so much differences in values as differences in the circumstances under which the values are called into play. There is of course some difference. Although the values from which motivation is derived in the disadvantaged child seem to reflect the dominant culture concern with status, material possessions, ingroup morality, fair play, competition, etc., there is usually lacking a concern with the aesthetics of knowledge, symbolization as an art form, introspection, and competition with one's self. The latter values are not only pushed by middle class parents and teachers, but also may be sources of motivation and support for academic learning.

Rosen (1956), observing a relationship between high motivation and high grades, postulated that middle class children are more likely to be taught the motives and values which make achievement possible. Similarly, in Gould's study (1941), only sons who internalized their parents' values of aspiration were sufficiently motivated to overcome obstacles which faced them at school. Bernstein (1960) found achievement strivings arising from parental demands for success to be a more central motivational factor among middle class than among lower class children.

Closely related to these motivational factors are attitudinal factors, and these too are often a source of problems in educational planning for disadvantaged children. Hieronymus (1951) found that higher socioeconomic status was correlated with a high level of aspiration and positive attitudes toward school, while negative attitudes toward school and lower levels of aspirations were more frequently encountered in lower socioeconomic status groups. Sewell's (1957) finding that educational aspirations tend to be greatly influenced by class values in a manner favoring the middle and upper classes is consistent with the earlier work. Among other characteristics which have been referred to in this population are utilitarian attitudes toward knowledge and negative attitudes toward the pursuit of knowledge. Many of these children and their parents view education primarily in terms of its job market value, and their orientation is toward achieving the minimum level of education commensurate with employability.

As important as these attitudes toward school and learning may be, it is in the area of attitude toward self and others that the crucial determinants of achievement and upward mobility may lie, and it is in these areas that our data are least clear. It has been observed by some that disadvantaged children show affinity for ingroup members and demonstrate a sense of distance from or even hostility toward representatives of outgroups, whether in peer or nonpeer relationships. In contrast, other observers have noted the high degree of respect and awe in which these children hold selected outgroup status persons or idealized models. Tendencies toward self depreciation and depressed self concepts have been noted by several observers (Dreger, 1960; Keller, 1963). Goff (1945) found that lower class children have more feelings of inadequacy in school than do children from the middle class. It is around these attitudes toward self that the rapidly changing national and world situations involving underdeveloped peoples are likely to be most influential, and it is difficult to predict the ultimate effect of these altered situations on self perception and behavioral change. Our knowledge and even our researchable hunches are as yet limited. But it is around these changing situations that the school may yet find a fulcrum on which to lever up motivation, aspiration, and involvement. There is growing empirical evidence to support the view that young people actively associated with the current civil rights struggle draw from their involvement in that effort a new source of motivation and an enhanced view of themselves (Coles, 1963). The impression is gained that such experiences are reflected in greater application of effort to, and greater achievement in, academic endeavors. The evidence for such improvement is less clear, yet there can be little doubt that attitudes toward self and toward the environment in relation to self are crucial variables in academic as well as in social and emotional learning situations. In fact, one of the strongest findings coming out of the Coleman (1966) data indicates that attitudes of environmental control exercise a powerful influence on academic achievement second only to family background.

Teacher Training

There are other categories of research information which deserve some attention in an overview of this type, but I prefer to use the time which remains to discuss the relevance to the teaching-learning process of some of the information which is available.

I have pointed to the fact that our knowledge of the disadvantaged is nonspecific. We have identified some behavior trends or conditions which are frequently encountered in this population, but since we do not know in what combinations they exist in individual children or the nature of the interaction between these several aspects of behavior, it is difficult to translate this knowledge into meaningful planning for educational intervention.

Klopf and Bowman (1966) report as a salient finding that, while the majority of (training program) directors placed both "understanding the life conditions of disadvantaged groups" and "development of instructional skills, techniques and materials" among their key objectives, they seemed better prepared to teach "understandings" than "skills." This is very interesting since education has been accused of being strong on the techniques end and weak on the understandings and knowledge end. The fact is, as we look at the content of many of these programs of teacher preparation, we see that we have not only failed to develop new techniques, skills, and materials, but also that we have not taught much understanding. I submit that there is a difference between learning what these children look like, how they behave, what their home conditions are like, what to anticipate in their behavior or what their group intellectual or social characteristics are, and learning what these conditions and circumstances mean to the individual child and for his functioning in the teaching-learning situation. I have not seen or read of a program which is preparing teachers to perform on that level, for that quality of understanding requires skill in behavioral observation and behavioral analysis. It requires competence in the qualitative appraisal of the behavior and functioning of the child under a variety of stimulus situations. It is from this kind of understanding that appropriate techniques, materials, and instructional skills will have to be developed. We have probably been unable to teach these techniques and skills because we have not yet developed the appropriate understandings. The available research reflects this failure. Having reviewed that research literature extensively, I cannot tell you what ought to go into the curriculum of disadvantaged children or how that curriculum should be organized or presented. I can only tell you that a great deal more is going on with these children than we understand, and the most important thing we can teach our teachers is how to go about finding this out.

From the Coleman (1966) report we learn that school and teacher factors account for little of the difference in academic achievement between children. We are told that family background factors emerge large. Now, Pettigrew in the Civil Rights Commission Report (1967) has made much of this and has turned this finding to support the equally important struggle for racial desegregation and integration of schools. On reanalysis of the Coleman data, Pettigrew shows that for older students it is not the background of the individual child but the social class and home background of the school population which is important. Children from poorer backgrounds do better in schools where most children come from more privileged homes. He argues that since the Negro middle class is small, we will have to integrate the schools in order to provide a proper social class mix for large numbers of children. But let's not lose the point of this reference! Could it be that Coleman found school and teacher variables to be of low level significance because there is not much variation in what schools offer and what teachers do along the dimensions that he studied? Maybe differences between classes with 28 and classes with 35 children are not significant. But does that mean that there is no difference between teaching 10 and teaching 50 children? Maybe teaching as a profession has not reached the point where the teacher is skilled enough to develop sufficient understanding of her pupils to plan learning experiences that outweigh home influences. If teachers are not that good and school techniques and materials have not yet been sufficiently developed, Coleman's statistical techniques cannot make teacher and school variables significant. But that does not mean that it cannot be done by those of us who train teachers and design school programs. In the training of school personnel for work with disadvantaged populations, four tasks seem important.

1. I attach prime importance to the mastery of content which can be taught. If content mastery loses its preeminent position in academic endeavor and we focus more sharply on the seeking and management of knowledge, even these skills are likely to be better taught by persons who know something well.

   For children who have problems in learning, the teacher's ability to move freely with his information, package it in a variety of ways, and relate it to a variety of problems and circumstances is likely to be more effective.
2. I attach equal importance to skill in the use of self in human interaction. One thing on which most of us agree is the difficulty of work with many children in depressed areas. The demands on the teacher are very great. The requirements for understanding, compassion, empathy, support, acceptance, flexibility, for strength, and for warmth would seem to require the superhuman. The successful teacher, regardless of style, appears to be the person who can emerge as a significant adult who can be trusted and relied upon.

   In the variety of situations the teacher is called upon to master, mastery of self would seem to be an essential trait.

3. I have already made reference to competence in qualitative appraisal of behavior and learning need, and I should add qualitative appraisal of relevant behavior. Quantification, classification, and prediction are no longer appropriate. Prescription is the need.
4. Experimentation and evaluation are needed. There appear to be strong elements of art and pragmatism in our work with disadvantaged children. Some of us have the touch; others don't. Some things work sometimes with some children; others don't. We are encouraged to try everything in the book.

   Under such circumstance we have an added responsibility to bring system and order to our experimentation and evaluation to bear upon our work. Teachers must be prepared to do this.

There was a time when farmers used to spread manure to fertilize their crops. Some crops flourished, others barely survived, and still others died before we learned that there is no universal fertilizer. Slowly we learned to do qualitative analyses of soil conditions and of plant requirements, and to develop chemical compounds which were designed to match the specific requirements of specific crops growing under specific conditions. We even learned which chemicals had to be put into the soil at what time before or during the life of the plant. Agricultural research has reached a level of high sophistication and successful farming has become a science.

There may be aspects of education which will forever be artistic, but we teacher educators have the responsibility to begin to make our future teachers artists who are also scientists.

References

Ausubel, D. P. How reversible are the cognitive and motivational effects of cultural deprivation? Implications for teaching the culturally deprived child. *Urban Education*, 1964, **1**, 16-38.

Bernstein, B. Language and social class. *British Journal of Sociology*, 1960, **11**, 271-276.

Carroll, R. E. Relation of school environment to the moral ideology and the personal aspiration of Negro boys and girls. *School Review*, 1945, **53**, 30-38.

Coleman, J. S., Campbell, E. Q., Hobson, C. J., McParthand, J., Mood, A. M., Weinfeld, F. D., and York, R.L. *Equality of educational opportunity*. Washington: US Government Printing Office, 1966.

Coles, R. *The desegregation of Southern schools: a psychiatric study.* New York: Anti-Defamation League, 1963.

Deutsch, M. The role of social class in language development and cognition. *American Journal of Orthopsychiatry,* 1965, **35**, 78-88.

Deutsch, M., and Brown, B. Social influences in Negro-white intelligence differences. *Journal of Social Issues,* 1964, **20**, 24-35.

Deutsch, M., Fishman, J., Kogan, L., North, R., Whiteman, M. Guidelines for testing minority group children. *Journal of Social Issues,* 1964, **20**, 127-147.

Deutsch, M., and Zeubin, J. *Communication of information in the elementary school classroom.* Cooperative Research Project Report Number 908. Washington: US Government Printing Office, 1964.

Dreger, R. M., and Miller, K. S. Comparative psychological studies of Negroes and whites in the United States. *Psychological Bulletin,* 1960, **57**, 361-402.

Eells, K. Some implications for school practices of the Chicago studies of cultural bias in intelligence tests. *Harvard Educational Review,* 1953, **23**, 284-297.

Goff, Regina M. Some educational implications of the influence of rejection on aspiration levels of minority group children. *Journal of Experimental Education,* 1954, **23**, 179-183.

Gordon, E. W. Counseling socially disadvantaged children. In F. Riessman, J. Cohen, and A. Pearl (Editors), *Mental health of the poor.* New York: Free Press, 1964. Pp. 275-282.

Gould, Rosalind. Some sociological determinants of goal strivings. *Journal of Social Psychology,* 1941, **13**, 461-473.

Heironymous, A. N. A study of social class motivation: relationships between anxiety for education and certain socio-economic and intellectual variables. *Journal of Educational Psychology,* 1951, **42**, 193-205.

Higgins, C., and Sivers, Cathryne H. A comparison of Stanford-Binet and colored raven progressive matrices IQ's for children with low socioeconomic status. *Journal of Consulting Psychology,* 1958, **22**, 465-468.

Hunt, J. McV. *Intelligence and experience.* New York: Ronald Press, 1961.

Keller, Suzanne. The social world of the urban slum child: some early findings. *American Journal of Orthopsychiatry,* 1963, **33**, 823-831.

Klineberg, O. Negro-white differences in intelligence test performance: a new look at an old problem. *American Psychologist,* 1963, **18**, 198-203.

Kloff, G. J., and Bowman, Garda W. *Teacher education in a social context: a study of the preparation of school personnel for working with disadvantaged children and youth.* New York: Mental Health Materials Center, 1966.

Lesser, G. S., and Stodolsky, Susan S. Learning patterns in the disadvantaged. New York: Yeshiva University, 1967.

Levinson, M. Subcultural values and IQ stability. *Journal of Genetic Psychology*, 1952, **56**, 674-691.

Montague, O. Arithmetic concepts of kindergarten children in contrasting socioeconomic areas. *Elementary School Journal*, 1964, **64**, 393-397.

Osborne, B. T. Racial differences in mental growth and school achievement: a longitudinal study. *Psychological Reports*, 1960, **7**, 233-239.

Pasamanick, B., and Knobloch, Hilda. Early language behavior in Negro children and the testing of intelligence. *Journal of Abnormal and Social Psychology*, 1955, **50**, 401-402.

Pasamanick, B., and Knobloch, Hilda. The contribution of some organic factors to school retardation in Negro children. *Journal of Negro Education*, 1958, **27**, 4-9.

Rosen, C. The achievement syndrome: a psychocultural dimension of social stratification. *American Sociological Review*, 1956, **21**, 203-211.

Sewell, W., Haller, O., and Strauss, M. Social status and educational and occupational aspiration. *American Sociological Review*, 1957, **22**, 67-73.

Siller, J. Socioeconomic status and conceptual thinking. *Journal of Abnormal and Social Psychology*, 1957, **55**, 365-371.

US Commission on Civil Rights. *Racial isolation in the public schools.* Volumes 1 and 2. Washington: US Government Printing Office, 1967.

Zigler, E. Mental retardation: current issues and approaches. *Review of Child Development Research*, 1966, **2**, 107-168.

CHAPTER 2: BEHAVIOR DISORDERS IN CHILDREN FROM DEPRIVED BACKGROUNDS

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The basic problems that this paper will consider are as follows: (a) the need for a disproportionate amount of services for the behaviorally disordered in areas heavily populated with educationally disadvantaged children, and (b) the probable effects of diverse socioeconomic reference groups on the production of behavior disorders, particularly when youngsters from certain of these reference groups are called on to interact with those from the majority culture.

Influence of the Reference Group

While not always used so broadly, the concepts held by the reference group may be a useful tool for comprehending these matters. Reference group labels such as race and social class may help clarify the phenomenon of behavior management and behavior control in youngsters who are called on to relate to a pluralistic society. The first task is to define those parameters of the majority culture which make achievement in school behavior difficult on the part of nonmembers.

Although Hyman (1942) coined the term scarcely more than a decade ago, the concept of reference group has become one of the central analytic tools in social psychology in the construction of hypotheses concerning a variety of social phenomena. The inconsistency in behavior as a person moves from one social context to another is accounted for in terms of a change in reference groups. The exploits of juvenile delinquents, especially in interstitial areas are being explained by the expectations of peer group gangs. Modifications in social attitudes are found to be related to these changes and new associations. The concept of the reference group has been partially useful in accounting for such things as choices made among apparent alternatives, particularly where the selections or choices seem to be contrary to the "best interest" of the chooser. The reference group of social class can be used as a partial explanatory phenomenon to account for the high incidence of inschool behavior disorders in deprived children. In connection with this approach, several assumptions will be made. Among these are the following:

1. There is a clear and ever present existence of a class structure in this country. This notion may make us a little uncomfortable, for it does not quite fit in with our dream and pronouncements of equality for all. But the existence of a rigid and long lasting structure of class is a first factor that must be considered. There are changes in class structure over periods of time, but not in the elimination of a class structure. Many observers feel that the class structure is hardening.
2. One's location in the class structure permeates the total fabric of one's life.
3. The middle class way of life is clearly dominant in this society. Any variation from the middle class way of life is considered to be problematic.
4. Ethnocentrism is the idea that is basically expressed in the statement, "The way we are raised is the best." Ethnocentrismic attitudes of teachers work to the disadvantage of minority groups and low socioeconomic status youngsters.
5. It appears that although the four previous points may have validity as assumptions, one must still deal with the fact that this nation prides itself on diversity and believes that in diversity comes strength. Therefore, while the middle class way of life may be viewed as the best, it does not mean that Americans want everyone to be middle class. There is an ever present cry for diversity, for a wealth of differences—different religious groups, different racial groups, different language groups, and many others.

Effects of Class Structure on the Disadvantaged

The youngsters in deprived groups—that is, the youngsters who are from socioeconomic, ethnic, or racially disadvantaged groups—are almost always overrepresented in the various kinds of statistics describing nonadapted behavior. In delinquency, dropping out, mental illness, and the like, this type of youngster contributes disproportionately to the incidence of the problem under consideration.

Undoubtedly, the most extensive and elegantly designed studies of the overrepresentation of children from low socioeconomic and minority group backgrounds are those conducted by the interdisciplinary team of Hollingshead and Redlich (1958). These investigators first mapped out the class structure of the New Haven, Connecticut, community and derived an Index of Social Position which yielded five social class strata, each defined in terms of occupation, education, and area of residence. A psychiatric consensus was then conducted to determine the number and kinds of patients in the community and a large amount of information was gathered on each patient. What is of particular note in the work of these investigators is the use of a normal control sample and control of population distribution of social class membership. These investigators take pains to point out that their results have reference only to diagnosed or treated mental disorders. They report that as a whole, within such groups, the psychiatric population falls lower on the status scale as compared with a normal control sample. Moreover, neuroses (total preference) is more frequent in upper status groups, and psychoses (total preference) is more common among lower status groups. This line of finding is especially marked in regard to schizophrenia. Ausubel and Ausubel (1963) make observations and provide some of the information needed to understand these incidence figures. They argue that the ego development of segregated Negro children in the United States manifests various distinct properties, both because Negroes generally occupy the lowest stratum of the lower class subculture and because they occupy an inferior caste position in American society. The authors suggest that the inferior caste position of Negroes is marked by an unstable and matriarchial type of family structure; restricted opportunities for acquiring educational, vocational, and social status; varying degrees of segregation from the dominant white majority; and a culturally fixed evaluation of their dignity as human beings. It would appear that the consequences of this regrettable state of affairs for Negro children's self esteem and self confidence, for their educational and vocational aspirations, and for their character structure, interpersonal relations, and personality adjustment, constitute the characteristic features of their poor ego development.

Ausubel and Ausubel (1963) further suggest that during preadolescence and adolescence segregated Negro children characteristically develop low aspirations for academic, vocational, and behavioral achievement. These low aspirations reflect existing social class values and persist as values as a function of restricted modes of upward mobility, restricted vocational opportunities, deficient parental and peer group support, and the impoverishment of the Negro family in terms of the norms of the majority reference frame. Because of loyalty to parents and rejection by the dominant white majority, Negro adolescents may develop ambivalent feelings toward middle class achievement values and personality traits necessary for their education.

Maas (1951) interviewed parents and peers of 21 subjects and posed a reinterpretation of some social behavioral patterns of pre- and early adolescence in lower class and core culture families. The results recorded included psychologically closed and quite rigid relationships between parents and their children in the lower class. The core culture children were reported as having a more open and flexible parental relationship. Lower class children expressed a fear of parental authority and were characterized as either a prototype of the bully or an oversubmissive follower. The core culture children were reported as not seeming to fear to identify with the threatening power of adults. Lower class parents were reported as closed or inaccessible to the child's communication. Core culture parents were reported as open to communication. The peer relations of lower class children were classified into two types of security seeking relationships: one in which the child identified with the power and needed peers to establish his high status in relation to his contemporaries, and the other in which the child seemed dependent upon the parents' physical presence for mutual succorance and direction. In core culture peer groups, a much less dependent relationship among siblings and peers was reported.

It seems to be a well established fact that certain values and practices of child rearing vary substantially among families representing various social strata. (For a summary of other studies over a 25 year period see Bronfenbrenner, 1958.) It has been shown, for example, that middle class parents, as compared with lower class parents, are more permissive in the child's spontaneous desires, express affection more freely, and prefer psychological techniques of discipline such as reasoning or appeals to guilt to a more direct method such as physical punishment, scolding, or threats. In other words, the ratio of support to control is higher among middle than low class families. And if this analysis is valid, it should follow that the optimum level of authority or self discipline should occur earlier at higher socioeconomic levels. The delay in the appearance of self authority and of self discipline in the lower socioeconomic classes makes for increased problems for the children of such families when these children enter and attempt to persist through school.

The failure of the educational institution to overcome the children's environmentally determined behavioral handicaps too often results in early failure, increasing alienation, and an increasingly greater gap between the lower class and the middle class youngsters as they progress through school. In other words, intellectual, behavioral, and achievement differences between lower class and middle class children are the smallest at the first grade level, and tend to increase through the elementary years. It is at the early elementary level that the interaction between school and early environment, instead of having a facilitating effect, has a negative influence. While the school does not cause the initial problem except perhaps through its effects on the previous generation and its prevailing point of view on segregated attendance in relation to neighborhood housing patterns, it was not until this decade that the schools began to accept the responsibility of overcoming the initial behavioral and academic handicaps of a culturally handicapped child.

Preschool Programs

Programs for compensatory education have implicated the school as the most promising agency for providing environmental compensations. It is through this institution, which reaches every child, that the requisite stimulation for facilitating learning, psychological maturation, and acculturation can be most efficiently organized and programed. Yet, it is now estimated that up to 60 percent of lower class children are retarded two or more years in reading by the time they leave elementary school. Critical and optimal periods for many aspects of development in learning in both humans and animals have long been studied. These concepts are always related to stimulation or interaction between the organism and the environment. Thus, they represent an important and additional dimension when we discuss influences on development and behavior. Apparently, it is not sufficient merely to provide particular stimulation for the growing individual; it must be supplied at a special time, or within particular time limits, if it is to have the most desired effects. Thus, a program intended to compensate for environmental deprivation would be most effective if supplied at a particular stage in the life of the child, during his early school experiences.

The literature on the subject of human development indicates that the period of greatest plasticity is during the time of initial socialization. Since the bulk of literature in this area concerns animals, generalizations must be carefully confined. But, seemingly, as one ascends the phylogenetic scale, there are greater ranges of time during which the organism has high levels of plasticity and receptivity. There is an insufficient body of data to hypothesize a most critical period for learning in the child, and there are probably different critical or optimal periods for different functions. However, at about three or four years of age there is a period which would roughly coincide with the early part of what Piaget calls the Preoperational Stage. It is then that the child is going through the later stages of socialization when he is required to focus his attention and monitor auditory and visual stimuli, and when he learns through language to handle symbolic representations. It is at this three to four year old level that organized and systematic stimulation, through a structured and articulated behavioral modification and learning program, might most successfully prepare the child for the more formal and demanding structure of school. It is now, at this early age, that compensation for prior deprivation can most meaningfully be introduced. And, most important, there is considerably less that has to be compensated for at this age than exists when, as a far more complex and at least somewhat less plastic organism, the child reaches the first grade.

Not only is there considerably less to be compensated for both academically and behaviorally during the preschool years, but also differences between lower and middle class cultural milieus are not so difficult to span and mesh at this age. Most writers agree that all peoples have difficulties in spanning cultural discontinuities, and that entrance of the lower socioeconomic status child into school for the first time places him in an environment which, in many respects, is discontinuous with his home. This discontinuity is minimal for the middle class child who is likely to have had the importance of school and of school behavior imprinted in his consciousness from the earliest possible age. For him, therefore, the school is central and is continuous with the totality of his life experiences. As a result, there are few incongruities in behavior patterning and achievement motivation between his school experiences and any others he is likely to have had. And there are intrinsic motivating and behavior molding properties in the school situation to which he has been highly sensitized. Further, there is more likely to be continuity in the school-faculty orientation with home-family orientation. Failure can be interpreted to him in appropriate and familiar terms, and the methods of coping with it can be incorporated, increasing the motivation or offering the necessary rewards, goals, or punishments to effect the desired changes in behavior.

For the lower class there is not the same continuity or contiguity in behavior expectations. The lower class child does not have the same coping mechanisms for internalizing success or psychologically surviving failure in the formal learning setting. Most writers agree that if the lower class child starts to fail, he does not have the same kinds of operationally significant and functionally relevant support from his family or community or from the school. Further, because of the differences in his preparation, he is more likely to experience failure.

Thus, the middle class child comes to school prepared, for the most part, to meet the demands made upon him. The expectations of his teachers are that he will succeed. As he faces the tasks that are congruent with his underlying skills, he is able to succeed, and thus he achieves a feeling of competence which is vital for the promotion of a continuing positive interaction with his environment. The lower class child, on the other hand, experiences the middle class oriented school as discontinuous with his home environment, and, further, comes to it unprepared in the basic skills on which the curriculum is founded. The school becomes a place which makes puzzling demands and where failure is frequent and feelings of competence are subsequently not generated. Motivation decreases and the school loses its effectiveness, the academic gap widens, and the behavioral problems become intensified.

It is in the transitional years from the preschool period through the elementary school years that the child is first subjected to the influence and the requirements of the broader culture. It is then that the two environments are always present for him: the home environment and the school environment. But it is also in the preschool years especially and, to some extent, in the early years of elementary school that the child is most malleable. That is the point at which efforts might best be initiated to provide a third environment to aid in the reconciliation of the first two. Such a reconciliation is required because, especially for the child from a disadvantaged background, there are wide discrepancies between the home and school milieus. In the intervention environment, preventive and remedial measures can be applied to eliminate or overcome the negative effects of the discontinuities, especially that of inadequate school-focused behavior patterning.

The type of behavior disorders such youngsters are likely to show and with which the school will be called upon to deal might be outlined as follows:

Behavior disorders primarily due to lack of emotional integration of the family. Poorly integrated families provide ineffective examples for setting effective discipline for development of social conscience. Hence, the family is an ineffective mediator of positive social values. The youngsters of such families may, however, be receptive to some part of the culture but not to others. The results in adult life of such poor family integration are well known to practitioners in welfare and social service agencies. Characteristic disorders can be found among men in varying occupational categories. Rather than being causally related in some simple fashion, it is contended that occupational choice, mental disorder, and family disintegration arise from such underlying factors as education, intelligence, and the effects of racial and religious discrimination. Further, the social correlates of occupation are seen to be highly relevant to rate of disorder; since society takes the view that those men who do not hold decent jobs and do not earn decent wages to support their families are not men at all, it is not difficult to see how the cycle of family disintegration begins. Emotional integration of the family suffers when fathers seek to escape from themselves by excessive drinking or by attempting to reassert their manhood in promiscuous behavior.

Frumkin (1954), for example, on the basis of his study of the relationship between occupational status and mental disorder, concludes that lower class occupational groups develop mental illnesses which are largely sociogenic, upper class groups develop illnesses which are mainly psychogenic, and middle class groups fall prey to sociopsychogenic disorders. Frumkin further asserts that "while psychogenic factors are important in the development of mental illness, sociogenic factors, as evident in sociopathic features of our social structure, are mainly responsible for growing rates of mental illness [p. 160]." Morse (1958) mentions that as family figure relationships deteriorate, the children internalize guilt, anxiety, or conflict. Eventually some of this must be acted out, and the usual response is aggressive behavior.

The situation where the behavior disorder is primarily a result of the child's responding to an emotionally integrated home but where the child fulfills the conscious or unconscious antisocial impulses and desires of the parents. Children from such situations have been studied intensively. Very often their parents hold attitudes which tend to influence the pattern of responses their children develop to various stimuli. Parents affect the social schemata of their children through verbalization of their own perceptions and actual encounters of social situations, such as repeated job denial or employment discrimination. From repeated exposures to parents' negative view of the environment, be they reality or distorted perceptions, the child's ability to test and accept the reality of his own senses becomes compromised. He has to deal with the intense, constantly present feelings of his parents and the contradictory expressions of the larger socioculturеd environment. His personality becomes disorganized. His pattern of behavior becomes a stereotyped, inappropriate response to all later situations that are reminiscent of these earlier ones. Seldom does one incident determine a child's personality; rather, it is the constant exposure to a set pattern of parental feelings, behaviors, and values which gradually become a vital part of the child.

Martin Deutsch (1964) similarly describes how parental attitudes work to influence the behavior of lower socioeconomic status children. He suggests that adult-child dynamics establish the basis for the whole later learning process. He further points out that the self image of the parent cannot help but play a vital role. If the parent sees himself as unjustly discriminated against in terms of race prejudice or socioeconomic status prejudice, or both, his social responses will reflect this attitude. Contingent upon the child's identification with his parent, he would be expected to find resentment shown toward status dispensing sources. If the discrepency between "deserved" and "achieved" status plays an important enough role in the parent's social schema, the child may well reject the value system of the "unfair" status controlling group and, being eager not to duplicate his parent's unrewarded efforts, become part of a similarly frustrated group or subculture in which he is assured of immediate ingroup status and repudiation of social status norms as invalid. Since this social schema receives the reinforcement of the ingroup, and since occasional punishment inflicted by the rejected outgroup does not bring about response extinction, then the responses against social mores continue to be practiced and generalized to more and more social situations. Any adult who attempts to step in and halt further development of this schema faces the problem of these schemata generalizing to his efforts. After all, as Deutsch (1965) said, "It is adults who are responsible for providing the link with the past and the present by calling to mind prior shared experiences [1965, p. 699]." Anxiety generalizes to the person who brings such experiences to mind.

Cases in which antisocial impulses or behavior disorders are primarily intrapsychic. The hypotheses of increased incidence of mental disorders in children from low socioeconomic backgrounds stem partly at least from ecological research relative to the culture conflict thesis. One could argue that the process of acculturation is one of the prime factors in the etiology of mental disorders. The implication of this thesis is that social disorganization, subcultural conflicts, and the like are critical factors in the causation of mental illness. Thus, one would expect a high proportion of behavior disorders as a function of mental illness among immigrant groups, among highly complex cultural groups, and among groups undergoing assimilation of new or foreign cultural influences. Probably the most significant commentary on the role "culture conflict" as a determinant of mental disorder is the recent work of Ausubel and Ausubel (1963).

The normal hyperactivity and rebelliousness which cannot be constructively integrated by the low socioeconomic child's personal environment because of a lack of acceptable outlets. This kind of behavior disorder is one that we think of handling by providing drag strips and other places where children who tend to have a lot of energy and need for excitement, but not real destructive hostility, can go and work it out. However, it is unfortunate but true that in this society there is the need for excitement which very often leads to the expression in devious maladaptive ways in areas where facilities for a more natural "drain off" expression do not exist.

Those children whose behavior disorder is largely the result of efforts to seek and maintain status in their academic and peer groups. There is some literature available which suggests that low socioeconomic status children come to school poorly prepared for the activities of learning. Since they do not achieve academic status as learners, this means that they have to tolerate in their personality a greater degree of anxiety associated with not being able to learn. There is also some indication that at the upper elementary and junior high school level there is a loss of status in terms of social outlets. The subculture of the adolescent is still pretty much based on the attitude of gaining status through style of dress, leisure, access to an automobile, money, and kindred possessions, with the result that middle class youth enjoy a great advantage within this informal network, also.

Educationally deprived adolescents and youths attending school at the secondary level have not been the recipients of creative special education programs in past years. There is no acceptable intervention procedure in wide use which respects the integrity of adolescents by not drawing undue attention to their condition of difference, while at the same time exerting maximum influence in terms of remediation or prevention of their mental health problems at school. The special class design has worked fairly well for elementary age pupils and is used in the secondary school with all of the encumbrances and drawbacks peculiar to any program which sets the adolescent child apart in a low status or negative way from his peer group.

Teachers and related special education specialists have been identified as coming into early contact with disturbed and disturbing children. Because school is the one institution through which most children will pass, teachers have been recognized as playing important and key roles in the early contact with disturbed children.

Morse (1965) and Redl (1959) have described the mental hygiene movement both in and out of school as still being dominated by concepts which have some validity in themselves but are quite remote from the Monday morning to Friday night routine of schools with their thousands of children who must not only be "seen" in interviews but must also be controlled in the social world of the classroom. The crisis intervention approach, utilizing the life space interview as a key technique for behavior change in pupils, is emerging as a potent organizational pattern for the delivery of basic help to elementary and secondary school age pupils.

cepts which have some validity in themselves but are quite remote

The basic rationale for intervention in crisis as a method of primary prevention and secondary amelioration has been discussed by Waldfogel and Gardner (1961). They take the position that emotional disturbances are readily reversible in children during the early stages of their development. They characterize crisis, in this respect, as being an increase in inattention, unpleasant affect, and disorganized behavior. They and others (Morse, 1963) point out that the most important factor in determining the outcome of crisis is the behavior of the relevant human figures in the person's immediate environment. This is the point at which their schema becomes important for the school. Their argument is that even a very small influence exerted by a person such as a teacher, during crises in a pupil's life, may be enough to decide the direction of mental health or mental ill health that the pupil may take. Morse (1965), commenting on the crisis intervention approach as it operates in schools with which he is familiar, makes the following observation:

> Old style moralizing gets nowhere with most young people today. The need is for a nonmoralistic but still effective way to discuss behavior with pupils. As indicated, traditional therapeutic methods are not suited to teachers and other school personnel.
>
> The life space diagnostic schema has also been the foundation of a new way for teachers to discuss problem situations, called Life Space Interviewing. Discussion is derived from the actual behavior which has taken place, usually in the presence or at least in the awareness, of the adult. This "situation" then becomes the focus for talking through the nature of such behavior in the future. In other words it embodies closure, a real look at what will take place next if this behavior is not controlled. Such interviewing can be used to alter certain behavior even in quite disturbed children. It is a most useful mode of confrontation for discipline situations. Again this is not easy to do and it does not always bring success even after extensive use, but it is school relevant. Teachers have found it most useful and, with supervised training, they have been able to develop real skill in such interviewing.
>
> Our thesis is simply this. Schools need to break new paths if they are to be effective in handling discipline without resorting to excessive repressive acts. A new mental hygiene oriented methodology has already been started. The techniques offer an infusion of control techniques with mental hygiene principles [p. 401].

The Senate Education Committee of the state of Michigan (Michigan Senate, 1967) reported in July of 1967 that 10 percent of school children manifest emotional disturbances which significantly interfere with their learning or classroom progress. It was pointed out in this report that the 10 percent figure of emotionally disturbed children in no way implies that all 10 percent should be enrolled in special education classes. It is generally estimated that from one-half percent to one percent of all public school enrollment might be served optimally by special classroom programs. The main point is that some programs which lend support to regular school teaching and counseling programs are obviously needed to handle large numbers of problem adolescents.

Summary and Conclusion

Behavior disorders in intellectually capable youth occur differentially among the various socioeconomic classes. It is maintained that socialization in middle class families prepares youth to compete successfully in school, while in lower class families children are not trained to conform to the academic and informal requirements of the school. Low socioeconomic status students behave poorly in school as a response to the status deprivation experienced in the informal network of peer relations and in the academic system of the school, as well as due to interpersonal and intrafamily dynamics.

Since these students ascribe their academic and social difficulties to the lack of justice in the assignment of status in the school, they may feel justified in criticizing, reforming, or dissociating themselves from that system. On the personal level, they are also likely to become alienated from the established set of middle class social norms operating in that system and, consequently, develop serious behavior problems at school.

References

Ausubel, D. P., and Ausubel, Pearl. Ego development among segregated Negro children. In A. H. Passow (Editor), *Education in depressed areas.* New York: Bureau of Publications, Teachers College, Columbia University, 1963. Pp. 46-67.

Bronfenbrenner, U. Socialization and social class through time and space. In E. E. Maccohy, T. M. Newcomb, and E. L. Hartley (Editors), *Readings in social psychology.* New York: Henry Holt, 1958. Pp. 400-424.

Deutsch, M. Social and psychological perspectives on the development of the disadvantaged learner. *Journal of Negro Education,* 1964, **33**, 232-244.

Deutsch, M. Early social environment and school adaptation. *Teacher's College Record,* 1965, **66**, 699-706.

Frumkin, R. M. New light on lunacy. *Journal of Human Relations,* 1954, **3**, 70-75.

Hollingshead, A. B., and Redlich, F. C. *Social class and mental illness.* New York: Wiley, 1958.

Hyman, H. H. The psychology of status. *Archives of Psychology,* 1942, **38**, 1-94.

Maas, H. S. Some social class differences in the family systems and group relations at pre and early adolescence. *Child Development,* 1951, **22**, 145-152.

Michigan Senate, Senate Education Committee, Subcommittee on Education. *Report on special education in Michigan.* Lansing, Michigan, 1967.

Morse, W. C. The education of socially maladjusted and emotionally disturbed children. In W. M. Cruickshank and G. O. Johnson (Editors), *Education of exceptional children and youth.* Englewood Cliffs, New Jersey: Prentice-Hall, 1958. Pp. 557-608.

Morse, W. C. Training teachers in life space interviewing. *American Journal of Orthopsychiatry*, 1963, **33**, 727-730.

Morse, W. C. The mental hygiene viewpoint on school discipline. *High School Journal*, 1965, **48**, 396-401.

Redl, F. The strategy and techniques of the life space interview. *American Journal of Orthopsychiatry*, 1959, **29**, 1-18.

Waldfogel, S., and Gardner, G. E. Intervention in crises as a method of primary prevention. In G. Caplan (Editor), *Prevention of mental disorders in children*. New York: Basic Books, 1961. Pp. 307-322.

CHAPTER 3: PROBLEMS OF PERCEPTION AND COGNITION AMONG THE DISADVANTAGED

HARRIETT GREEN KOPP

In considering the learning problems of the child classified educationally as disadvantaged, we must carefully define the parameters of the term "disadvantaged." We tend to assume that only the socioeconomically depressed are to be so included. From the point of view of learning ability, we must define as disadvantaged all those who do not meet the standards of expectation upon which educational programing has been developed. The existence of curricula, achievement tests, and educational norms is ample evidence that such standards are basic to education as it has been practiced in our century. The assumption has been that the vast majority of students meet presumed standards in respect to social, emotional, intellectual, neurological, perceptual, and motor development. The term "readiness" implies that at a specific chronological period the organism is ready for a particular task. Only in the area of special education, has the child who deviates markedly from such norms been granted the privilege of developmental difference. Even in this educational specialty, which assumes difference as its classifying concept, there have developed norms and standards for achievement within the various areas of exceptionality.

We must think, also, in terms of the reality of the expectations of the educator, in view of the actual developmental patterns of a given culture or ethnic group. In this century, we have come close to eradicating much of the normal dialectal variation in speech indigenous to particular geographic areas. This education toward the central tendency of general American speech has resulted more from the incidental learning derived from radio and television than from classroom teaching. Are we subconsciously seduced by analogy into asking educators to eradicate deleterious developmental differences without simultaneously requiring that society eradicate the genetic, cultural, and social determinants of such variation? If we, as a nation, are serious in our attempt to provide the equality of educational opportunity implicit in our democratic philosophy, we must not lose our awareness of the problem in toto as we attack "disadvantageousness" along the avenues open to us as educators.

Development of Language and Cognitive Skills

Intrinsic to the educative process is the development of cognitive skills. Cognition subsumes the development of language patterns at a level which permits the storage, retrieval, and integration of information. The ability to manipulate language internally and externally or to use language as an output function is predetermined by input patterns prior to age four or five. By the time a child is five, if his sensory equipment, cerebral functioning, psycho-social-motor development and environmental experiences are adequate, he will have formulated his own grammatical lexicon for the language within which he operates. He becomes, in effect, locked in at the linguistic level at which he operates before he enters the educational system. His readiness state for academic learning experiences, his ability to comprehend the complex auditory and visual signals of a verbal teaching system, and his motivation for learning are critically dependent upon the status of his input-output systems.

Research has shown that children in nonverbally oriented settings fail to receive the necessary quantity and quality of input to establish effective storage system patterning. It is, therefore, unreasonable to anticipate that these children will have sufficient cognitive skill to enter upon the usual academic learning experiences. If such a child is to progress successfully, his deficiencies must be analyzed and he must be programed into a succession of systematically structured experiences that will give him the cognitive tools he must have. This process must occur before his linguistic liabilities color his attitude toward learning.

Similarly, children in nonperceptually oriented settings fail to receive sufficient sensory input to develop complex discriminatory patterning. Exposure to sensory stimuli may be limited in a single specific sensory area, as in a deaf child, or may be limited to simple perceptions within the various sensory areas rather than the complex sequencing and multisensory perceptions required. The presence of intact peripheral receptors or of an intact cerebral cortex does not assure that the child will develop sensorially. It has been found, in recent research, that the infant exposed to an overwhelmingly complex environment replete with competing stimuli, as in the crowded slum dwelling, soon learns to block out or to ignore stimuli. For such a child, the initial learning environment must be structured to provide opportunity for attentive focus on stimuli selected to meet predetermined criteria of perceptual accessibility and complexity. When such a child is surrounded by an enriched learning environment, he is often unable to select from among the stimuli which compete for his fluctuating attention. He functions as does the child with a primary cerebral disorder who tends to fragment, to respond to a segment of a complex stimulus, to fail to retain sequence patterns, and to be unable to evaluate his response in terms of the input-output relationship.

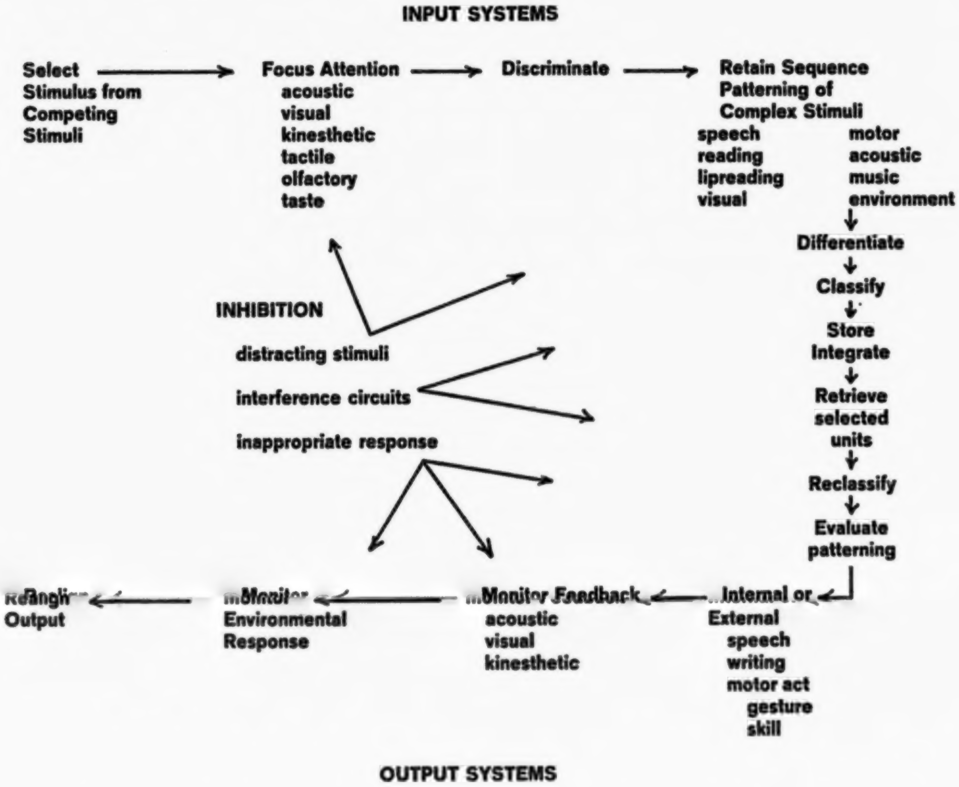
Children brought up in simple cultural-social settings may fail to receive training in the complex sequencing underlying memory span or in the retention of complex combinations of sensory variables. Their environmental and, specifically, their perceptual experiences do not provide sufficient opportunity for the development of the speed and accuracy of discrimination of complex stimuli or for practice in the rapid retrieval and integration of stored information units. Their experience in linguistic interaction may be limited to simple response forms because of the lack of variety and complexity in their social relationships. The demands upon their language output may not be sufficient to develop the retrieval, integrative, and reclassifying capacities of the brain. If there has been little experience with the techniques of discovery, evaluation, and self motivation and if intellectual curiosity has been stifled rather than encouraged, the learning process becomes passive rather than active. The individual so reacting may be said to be trained rather than to be educated. Only if developmental lags are located, analyzed, and appropriately treated can we hope to minimize the gap areas for the linguistically disadvantaged. The earlier the attempt is made, the more optimistic we may be. The more successful we are in mobilizing the child's family and neighborhood community, the better will be the prognosis for the child and for his siblings to come.

Diagnosis and Treatment

The teacher, administrator, or psychologist experienced in the techniques of differential diagnosis will need to determine the operational level of the child with respect to all of the variables basic to his active participation in self education. The less skilled teacher or diag-

Figure 1

Model of Input-Output Systems


INPUT SYSTEMS
Select Stimulus from Competing Stimuli
Focus Attention
acoustic
visual
kinesthetic
tactile
olfactory
taste
Discriminate
Retain Sequence Patterning of Complex Stimuli
speech
reading
lipreading
visual
motor
acoustic
music
environment
Differentiate
Classify
Store
Integrate
Retrieve selected units
Reclassify
Evaluate patterning
INHIBITION
distracting stimuli
interference circuits
inappropriate response
Internal or External
speech
writing
motor act
gesture
skill
Monitor Feedback
acoustic
visual
kinesthetic
Monitor Environmental Response
Output
OUTPUT SYSTEMS

nostician will find a test such as the Illinois Test of Psycholinguistic Abilities useful in estimating functional status as a beginning point for diagnostic teaching.

Examination of Figure 1 indicates specific variables with which we must be concerned because they appear to be trouble spots common to children with linguistic ineptitude. If the cognitive and precognitive skills developed are to be useful to the child, they must be brought to the level of automaticity so that he can perform required tasks with speed and accuracy and without self conscious awareness of the process. This means individualized programing of children, clinical teaching of small groups, the use of team teaching for flexible grouping, and stress upon the principle of continuing longitudinal evaluation of the child's progress and rate of learning.

We must consider not only the cortical activity but also the nature both of the variables which serve as stimuli and of the cortical storage units which must be retrieved for appropriate response.

The Detroit Day School for the Deaf has been engaged for the past seven years, through workshops and inservice education programs, in the preparation of specific classroom materials and curricula sequences to implement this approach to teaching. Similar materials and methods have been used clinically by the Kopps' over a long period of time in remedial reading and speech correction with aphasics and with cerebral palsied. The underlying teaching technique is to prevent incorrect response patterns insofar as is possible by careful analysis of the individual's developmental status and of his rate of progression. Thus, he is programed into a teaching sequence at his level, with learning stages tailored to his capacity for progress. This requires that we view curriculum in perceptual development, as in academic subject matter, as a continuum which may be entered at any appropriate point and which may be subdivided into segments of digestible size—a curriculum in which the dependency of new learning upon previous learning is planned carefully and revised as new information is made available from research or teaching sources.

A few examples in selected perceptual areas may help to clarify the method and materials. The visual task in reading as well as in viewing environmental stimuli requires that we discriminate variations in form, number, color, and size. It is possible to adapt with less difficulty to deficiencies in color vision if the adaptation is at a conscious level. It is useless to expect a child to discriminate among complex symbol forms or to perceive such information bearing visual elements in his environment as distance, gesture, movement, and direction, if he has not developed skill in rapidly differentiating variations within each of the major parameters of vision. Tachistoscopic exercises have been constructed to focus attention first upon a single variable such as shape—a square, a circle, a triangle, etc.—and then upon a combination of two variables—a large circle, a small triangle, etc. The goal in viewing is twofold: first, to discriminate the stimulus rapidly, increasing the speed by decreasing exposure time as quickly as possible; and second, to retain the image in visual memory and to reproduce it in any one of a variety of ways—by drawing, by selection of similar stimuli, or by oral verbal description. Such exercises may be initiated in small groups of children using flash cards with quite satisfactory results. Tachistoscopic projection has the advantage of permitting controlled exposure rates.

When the child can handle combinations of two variables in a stimulus, he is ready to work with extension of his perceptual span and of his visual memory span. This may be done with rapid exposure of a group of objects beginning with two and increasing the number to five or more, depending upon the child's age. The objects must be sufficiently small and simple in design to permit rapid viewing in a single fixation of the eyes. If such objects are unattainable, larger objects may be used with longer exposure time, but the principle of left to right ocular movement must be established by the teacher. The child is required to reproduce the object group accurately, from left to right. His response may be oral—cat, house, boy, knife—or it may consist in arranging similar objects or in selecting the correct pattern sequence from multiple choice. The difficulty of this task may be increased by adding to the internal detail or complexity of the stimulus. For example, it is easier to retain and to recall a series such as man, boy, girl, baby, than a series from different categories such as fish, boy, cup, car. Objects are usually easier than are abstract symbols. Abstract symbols become more challenging as internal detail becomes more complex.

Both the width of the perceptual span and the speed of the exposure may be increased with concomitant heightening of the demand upon visual memory span. There are several accompanying benefits from such a process. The child learns to develop a visual set, to focus his attention selectively, to inhibit environmental and internal distractions, and to respond quickly without fear of error. Since each child proceeds at his own pace, responding individually without attention to the responses of other members of his group, there should be minimal external pressure for success. Since the material is at a level which encourages correct response, the child's motivation is good and he acquires the expectation of success. The material increases in difficulty as rapidly as he can progress. Even very young children respond to the challenge of self improvement.

An accompanying visual cognitive exercise is the exposure of a picture at controlled speed. The child may be asked a number of questions. If it is a city street scene, he may be asked: "How many buses did you see? What color are they? How many cabs? What was the big boy doing? Did the man have a coat on? What was the small boy doing? Who was crossing the street? What color was the traffic light? Where do you think the old man was going?" The child has been required to view purposefully, to retain the total image, to retrieve elements in the image, to associate the visual elements with meaningful activity. His visual set, at this level, has been to "look at a picture carefully." At an earlier developmental stage, he may have been instructed to look at a picture to see what two boys are doing or to tell the color of the cabs. These are different visual cognitive processes, making cerebral and perceptual demands at different levels. The teacher must be aware of the progression of difficulty, of the nature of the task she assigns the student, and also of his response status for that level of skill.

For the child who may have limited language ability, a problem arising from bilingualism, or a problem in speech fluency, there are a series of specific acoustic exercises which should be administered. Again, it is necessary to proceed from the simple to the complex and only as rapidly as is challenging while permitting maximal success and self motivation.

Here the variables are pitch, loudness, and quality. If a child has learned to block out linguistic stimuli, the beginning teaching should use sound sources such as a drum, a ball, and a whistle. When the child discriminates among these through audition without vision, then he is ready to begin the task of retaining temporal auditory sequences and to develop auditory memory span. One task consists of combinations of various groupings of the objects, with the child arranging the objects in appropriate order: two drum beats, one whistle, one bell ring. Another task at a more difficult level consists of adding two variables: a loud drum beat followed by two soft beats. At increased difficulty is the addition of another variable: a loud drum beat followed by a soft bell ring and a loud whistle. Thus the child becomes aware of stress which later may be used in speech drills. As the child becomes skilled at auditory discrimination tasks, he may begin to use these skills in verbal drills.

Words within his speech vocabulary may be used in varying sequence. He may identify and arrange three objects in appropriate order, going always in correct sequence from first to last and arranging the objects from left to right. As auditory memory span develops, the task becomes more challenging if the words are closer in phonetic structure. He may be required to perform activities at increasing levels of complexity: "Put the white rabbit near the door, give me the yellow balloon, give three blue balls to John, and put a red sucker in your pocket." He may be instructed to underline, to circle, to draw, to color, to bounce a ball three times. The nature of the activity may vary with the maturity of the child, but the progression of auditory cognitive difficulty must follow a similar path. A child with a poor auditory input system may require many months of daily teaching to move from gross sound discrimination to following complex directions.

Nonsense syllables comprise a good speech exercise as well as exercise for auditory memory span but should not include oral response of speech sounds that are made incorrectly by the child. Exercises for such sounds should be confined to listening and identifying likeness or difference by a signal system until the child is capable of producing the sound correctly. This particular auditory skill is an important base for developing the ability to monitor acoustic feedback and thus to self correct and to evaluate his own speech.

Teachers of the deaf have long used specific teaching to develop linguistic skills. Some of these materials and techniques may be adapted for children with basic linguistic dysfluency. Other materials and methods are available from the area of primary language disorder. If we are to develop cognitive skills, we must keep in mind both the tasks and the major variables with which we can work. The child must become aware of classification of vocabulary, using a wide variety of base categories. For example, among the categories for the word shoe are: clothing, feet, leather, verb (to shoe), etc. The number of categories expected should be limited only by the level of functional maturation. Association drills are fun and often reveal unsuspected gaps in experience and knowledge: shoe—horse, gym, leather, boot, slipper, sole, heel, string, tongue, high, hunting, high heel, baby, sandal.

If fluency is to improve, the child must learn to ask questions as well as to answer them. He must develop an awareness of language structure through exercises in changing number and tense, in supplying appropriate grammatical responses in elliptical sentences, in using gender correctly, and in using connectives fluently. He probably needs extensive vocabulary drill in antonyms, synonyms, and homonyms and in multiple meanings. He will need graded drill in predicting outcome from simple beginnings such as, "John fell. He. . . .," to supplying a number of possible endings to a cliff hanger story. He needs to estimate probability of occurrence and to be able to defend his choice verbally. He needs and will enjoy experience in identifying and in constructing incongruities from the simple "A boy had one ear and seven fingers," to more complex levels of verbal play on words.

Children with basic dysfluency usually profit from sequential exposure to awareness of emotional loading of words. They delight in discovering connotation as different from definition. Selection of words from their active vocabularies, "mess around, cool, crazy," can open the way to viewing language as a precise tool.

The speed with which these linguistic tasks are accomplished may be increased by requiring as rapid responses as possible. Tachistoscopic exposure of a question, with the answer to be given immediately and orally, requires reading the question rapidly, retaining it, comprehending it, retrieving the necessary information, and responding in assigned form (a word, a phrase, a sentence). Tachistoscopic exposure of a verb may be followed by a request for a sentence using it, a question about it, a synonym, an antonym, or the future tense. Such an exercise requires realignment of information units, evaluation, and integration of a number of storage systems. It is a difficult but rewarding task if performed rapidly.

There are, of course, many other areas which might and should be developed if we are to help the disadvantaged child to reach his potential. The selection of certain perceptual and cognitive tasks is an attempt to illustrate a philosophy, a method, and some materials. The purposes are to determine the developmental status of a child on the developmental continuum common to his peers; to assess his specific adequacies and inadequacies; to program him into the continuum at his level; to motivate him for active participation in self education and to teach him to evaluate his progress realistically; to give him a feeling of success and ability to achieve; and to be certain that he has the tools and the skills before he is assigned a task dependent upon these skills.

CHAPTER 4: THE DISADVANTAGED GIFTED

JAMES J. GALLAGHER

The mercurial changes in women's fashions are the epitome of constancy compared to the changes in educational fashions. Such changes have lately been accentuated by the differential outpouring of support funds from public and private sources intent upon solving some of the more serious of societal problems. It should not necessarily be inferred, either, that spotlighting a particular problem area for a time is bad. We need to know more about elephants' ears and trunks and tails, and this is certainly one way to do it. It becomes unfavorable to the orderly pursuit of knowledge only if the siren song of grantsmanship leads us to believe that we are indeed studying the whole elephant. The point to this preface is that there is great interest now in the culturally disadvantaged and, hence, in one of the most intriguing of his characteristics—the plasticity of his intellectual development—and the search for means by which environment can be modified to maximize it.

The concept of giftedness stems from an earlier emphasis which stressed the importance of heredity in children's development. Heredity as a concept in education is now dormant, to say the least. The last time the writer heard the term used in the context of the culturally disadvantaged, the user was accused of dangerous right wing tendencies. It was, no doubt, the fervor of the cause of the disadvantaged that prompted this attack and not the fear that holders of the public purse strings might have reacted unfavorably to such an idea.

But reality has a way of reappearing regardless of our own wishes, hopes, or desires. Those concerned with public policy are subject to the same cycle that has been attributed to stutterers:

Over-Idealism—>Frustration—>Despair

The establishment of too high levels of aspiration leads inevitably to disappointment which, in turn, causes an exaggerated feeling of despair and disinclination to try again. Although we are now in the idealism stage of the public policy makers, already hints of doubts and disappointments are coming to the surface. Perhaps by placing the two pictures of the gifted and the disadvantaged into a kind of stereopticon, we can produce a blended picture which can balance our portraits of both groups.

Human Resources for Our Society

One of the ways in which there has been a conjunction of the interests of the disadvantaged and gifted is in the concern for national human resources. During the middle 1950's, increasing concern was being expressed regarding the extent of our human resources as a nation. Such studies as Plaut (1957), for instance, indicated that only one percent of American Indians continued to higher education compared to about 25 percent of the white population. Only 2 percent of American Negroes went to interracial colleges, and other minority groups such as Puerto Ricans and Mexicans showed similar deficiencies. There is always a question of interpretation in such studies as to whether limited financial opportunities have kept otherwise talented youth from furthering their education. The weight of the evidence, however, suggests that the problem is much more serious. It is not a matter of hidden talent but, at the later grade levels, a matter of deteriorated or erased talent. Cole (1956) reported on the distribution of available talent based on the percentage of students in each state obtaining two standard deviations or above on the Selective Service Qualification Tests given in the early 1950's. Table 1 shows the list of states with the highest and lowest percentages of superior talent. Here the states with the lowest percentage of talent supply were in the southeast where general support for education is not high and a rural agricultural society does not place great value on intellectual development.

An early study by Ginzberg and Bray (1953) of the men rejected for military service on the grounds of mental deficiency gives some backhand information on talent development. One can assume that if the bottom part of the distribution has been reduced by circumstances, the top part of the distribution has been lowered as well. Excluding Negro men from consideration, approximately 5 percent of white males were rejected from the southeastern and southwestern states on grounds of mental deficiency, whereas only one percent of whites from the West, Midwest, and Middle Atlantic states

Table 1

The States with the Highest and Lowest Incidence of High Level Talent (Cole, 1956)

States with Highest Incidence of Talent	*States with Lowest Incidence of Talent*
New Hampshire	Mississippi
Massachusetts	South Carolina
Connecticut	Arkansas
Minnesota	Alabama
New York	Kentucky
New Jersey	Georgia
Wisconsin	Louisiana
Michigan	Texas

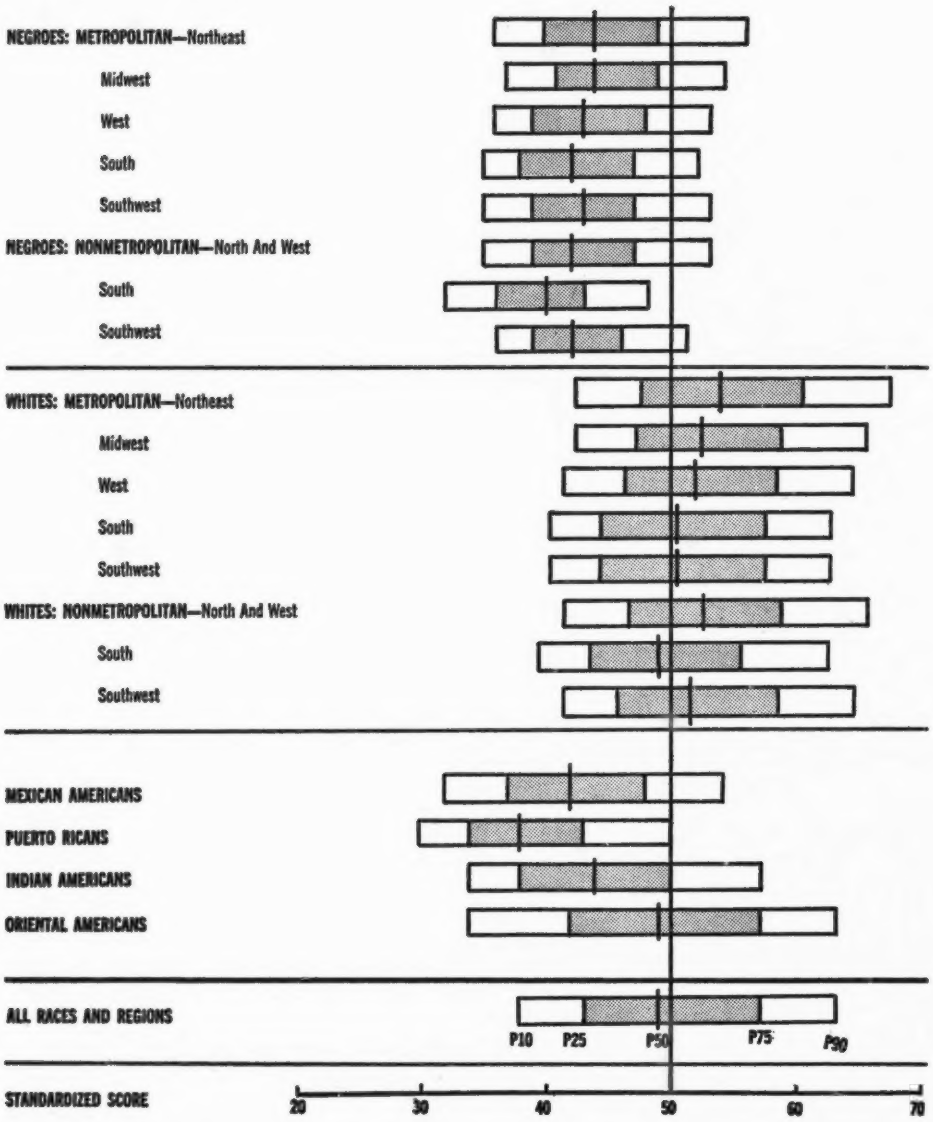
were rejected for the same reasons. When Negroes were added to the comparison, the rejection rate of men from the southeastern states became even more dramatic compared to other sections of the country.

One of the most extensive explorations into the relative status of minority groups in educational circumstances has been completed by Coleman, et al. (1966). This report attempted to establish the relative educational and intellectual status of minority group children versus white children throughout the various regions of the country. Grades 1, 3, 6, 9, and 12 performances were measured and a sampling of 900,000 children, roughly half white and half nonwhite, were identified and tested. The sample chosen was a stratified sample with an emphasis on obtaining a large enough sample of nonwhite pupils for comparison. For the purposes of this paper, the sampling would seem to have been as adequate and representative as any previous survey yet taken.

The tests that were given to the students in school were portions of previously standardized tests. For example, the test of ability at grade 6 level comes from the School and College Ability Tests that have been well established as group ability measures in the schools. Figure 1 shows the relative status of white and nonwhite populations divided by geographic and urban-rural regions. It is clear to see that the mean of all the Negro samples lies substantially below the general mean of all groups, and dramatically below the mean of the white populations. In some instances, the average of the Negro popu-

Figure 1

Verbal Ability Test-Grade 6



From Coleman, J. S., et al. (1966).

lation barely reaches the lower tenth percentile score of the white populations. It is easy to note also that the Negroes in nonmetropolitan areas, particularly in the South, are even further behind other members of their racial group in other parts of the country.

One interesting point that needs to be noted is the comparison of the other nonwhite populations. The Oriental Americans can be observed to roughly approach the overall performance of all races and regions, whereas the Indian Americans and Mexican Americans are similar to some of the Negro populations, and the Puerto Ricans fall further behind than any of the minority groups.

The authors of this survey take substantial pains to point out that the term "mental ability" here refers not necessarily to innate ability but rather to the ability to think abstractly, which they consider to be educationally oriented although not directly related to the specific education as is the achievement test. While this figure is related to grade 6, the pattern that is followed is roughly the same for all grade levels and for all areas.

Figure 2 shows the relative performance of Negro pupils in metropolitan areas in the South. Here we see a slight increase in performance from grade 1 to grade 3 which might well indicate that there was an initial stimulation by the school and then a very dramatic downward trend through the rest of the grade levels. In this regard, the Negro pupil starts out behind and falls progressively behind as each grade level is measured. In comparison to this, one can see in Figure 3 the relative status of white pupils in metropolitan areas from the same regions. Here one sees a very steady and consistent pattern holding firm over all grade levels so that while the white pupils in the metropolitan southern region hold their own, relatively speaking, the Negro pupils show a dramatic downward trend, and this trend is repeated in most of the other regions.

Although it is possible to see that a number of the nonwhite populations fall above the midpoint of the white scores, the very high performance which would fall in the area that we would traditionally refer to as gifted represents a relatively rare individual. This generalization holds for all populations, with the exception of the Oriental Americans.

The Coleman report would seem to support the Deutsch (1964) claim that not only does the disadvantaged student start behind the advantaged student but that his position progressively deteriorates with age. While these findings refer to a general population, there is some evidence supporting the notion that superior talent gets erased as part of this general downturn. Miller (1964) reported a survey in five elementary schools in a predominantly Negro area of high economic distress in Pittsburgh. Instead of the expectation

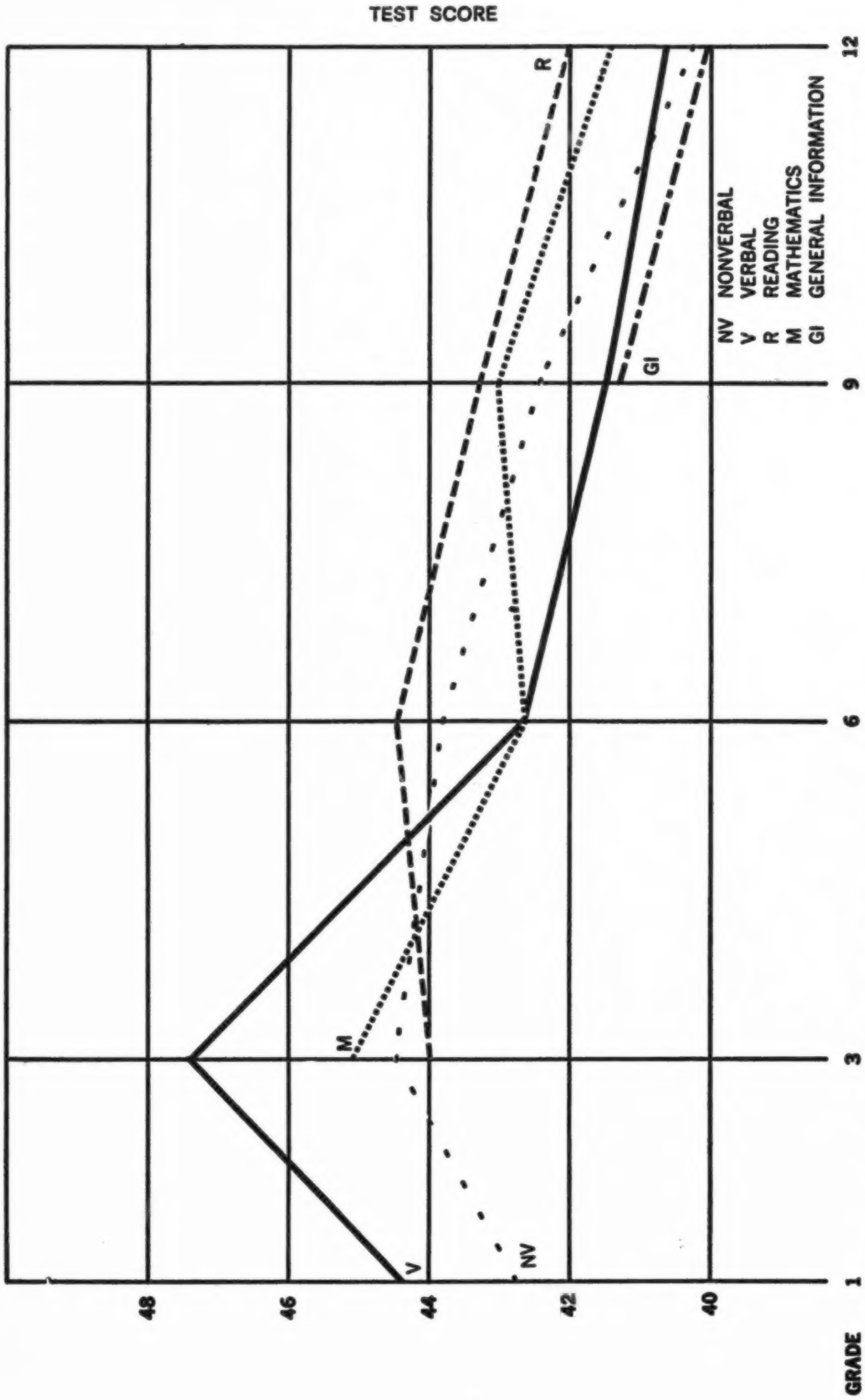


Figure 2 Negro Pupils in Metropolitan Areas—South Region

From Coleman, J. S., et al. (1966).

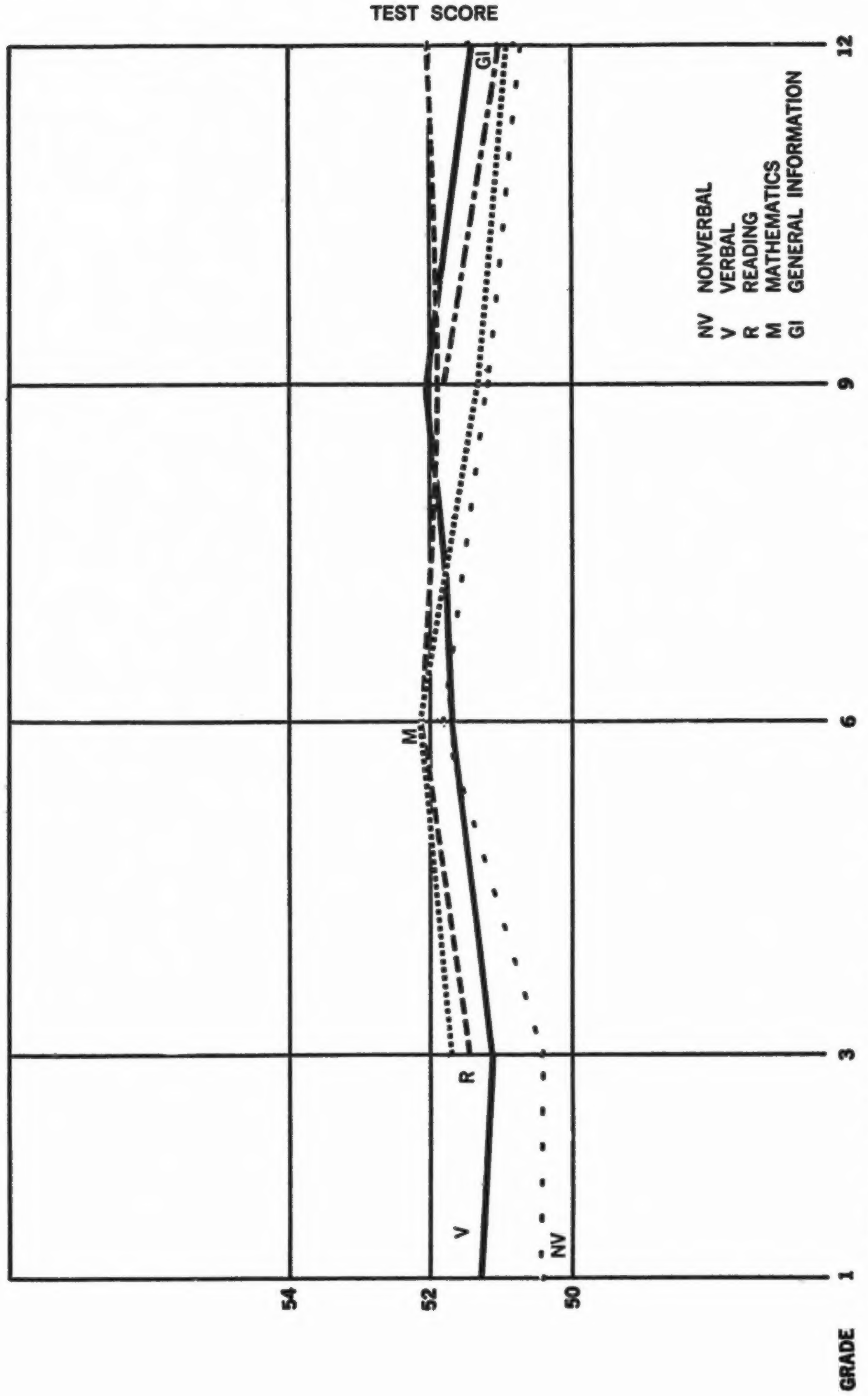


Figure 3 **White Pupils in Metropolitan Areas—South Region**

From Coleman, J. S., et al. (1966).

of 15 to 16 percent of students above Binet IQ 116, only 1.4 to 3.3 percent were found at that level. The percentage appeared to decrease somewhat from primary to elementary levels.

Since there is often a predominance of one race or one nationality found in unfavorable environmental circumstances, it is easy to jump to the conclusion that the deficiency found in that situation is a deficiency of that group rather than those circumstances. Currently the Negro is under such circumstances, as were various immigrant groups before them. Jenkins (1948) has pointed out that many Negro children have been found at the highest levels of intelligence. Jenkins reports on case records of 18 Negro children scoring above 160 on the Stanford Binet IQ test. Interestingly enough, all of these children came from northern urban areas. There is no question that great talent can be found in any identifiable subgroup in our society.

It is also interesting to note an earlier study by Rohrer (1942), who reported on the intelligence scores of Osage Indians who were substantially above performance of other Indian tribes and roughly comparable to white groups. The Osage Indians found themselves in a unique position in that oil was found on their land giving them the opportunity to create for themselves a better educational environment.

Gallagher (1966) summarized this collection of information on disadvantaged talented as follows:

1. Few talented youngsters, on a percentage basis, are found in subgroups of the culture coming from low socioeconomic groups.
2. Conversely, children from nationality and racial groups found in upper middle class areas appear with a greater than expected frequency of intellectual talent.
3. Attempts to intervene with positive stimulation seem to result in some improvement of intellectual functioning in the culturally disadvantaged groups.
4. The range of intellectual ability remains impressive within even the most impoverished groups [p. 70].

Talent Misplaced or Talent Erased?

One of the more confusing and fruitless searches available in the field of educational measurement has been the search for a culture free intelligence test which would avoid the cultural biases of the usual IQ test. It should be recognized that the assumption made by culture free tests is that intelligence may be mislaid but not destroyed. The latest attempts in this direction have been summarized by Karp and Sigel (1965). Most of these efforts have centered on trying to find tests on which students from disadvantaged circumstances or from lower social classes would do as well as their more advantaged colleagues. One can have compassion for this psychological sleight of hand attempt to bring fairness to an unfair world.

The hard facts are that unfavorable environment and circumstances do not provide the linguistic development necessary for success in a complex culture built around verbal and linguistic systems. Such talent suppressed is not easily regained. The embarrassing question not easily handled by those interested in culture free tests is, even if it were possible to construct such an instrument, what would we do with it if we had it? Surely such a test will not predict educational success when that success depends on the very verbal development that has been carefully excised from the test.

There is growing acceptance for the point of view that deprivation consists in the legacy of an unproductive value system as well as economic poverty. If the values that are passed through generations are unproductive intellectually, then a mere removal of physical or economic deprivation will not be sufficient to remediate the situation.

Rosen (1959) identified three major values closely related to achievement. These were:

1. Preference for activity—maintaining the possibility of manipulating one's environment to advantage—rather than passivity.
2. Preference for an individualistic, rather than a collectivistic, orientation so that the person feels free to break his ties with his family and other primary groups and does not subordinate his needs to the wishes of these groups.
3. Preference for planning for the future and for deferring present pleasures, rather than encouraging living for the moment.

Those subcultures supporting these values tend to perform well and show rapid upward social mobility, whereas those religious and ethnic groups not supporting them remain stationary (Strodbeck, 1958; McClelland, 1961). Thus, the value system of the deprived student should receive explicit attention as one crucial part of a curriculum program of the talented disadvantaged. The concern for and interest in values shown by the talented student should be put to good use in educational planning.

Characteristics of Disadvantaged Talented

Even when the disadvantaged student with intellectual talent measures up to acceptable intellectual standards, does he have special characteristics or problems when compared to more advantaged gifted children? Frierson (1964) compared talented students in the Cleveland major work classes who came from lower and upper class circumstances with similar samples of lower and upper class students of average ability. The gifted students from different social class backgrounds showed a close similarity in personality patterns, but the disadvantaged gifted showed less superego development or self discipline and preferred sports and games to reading.

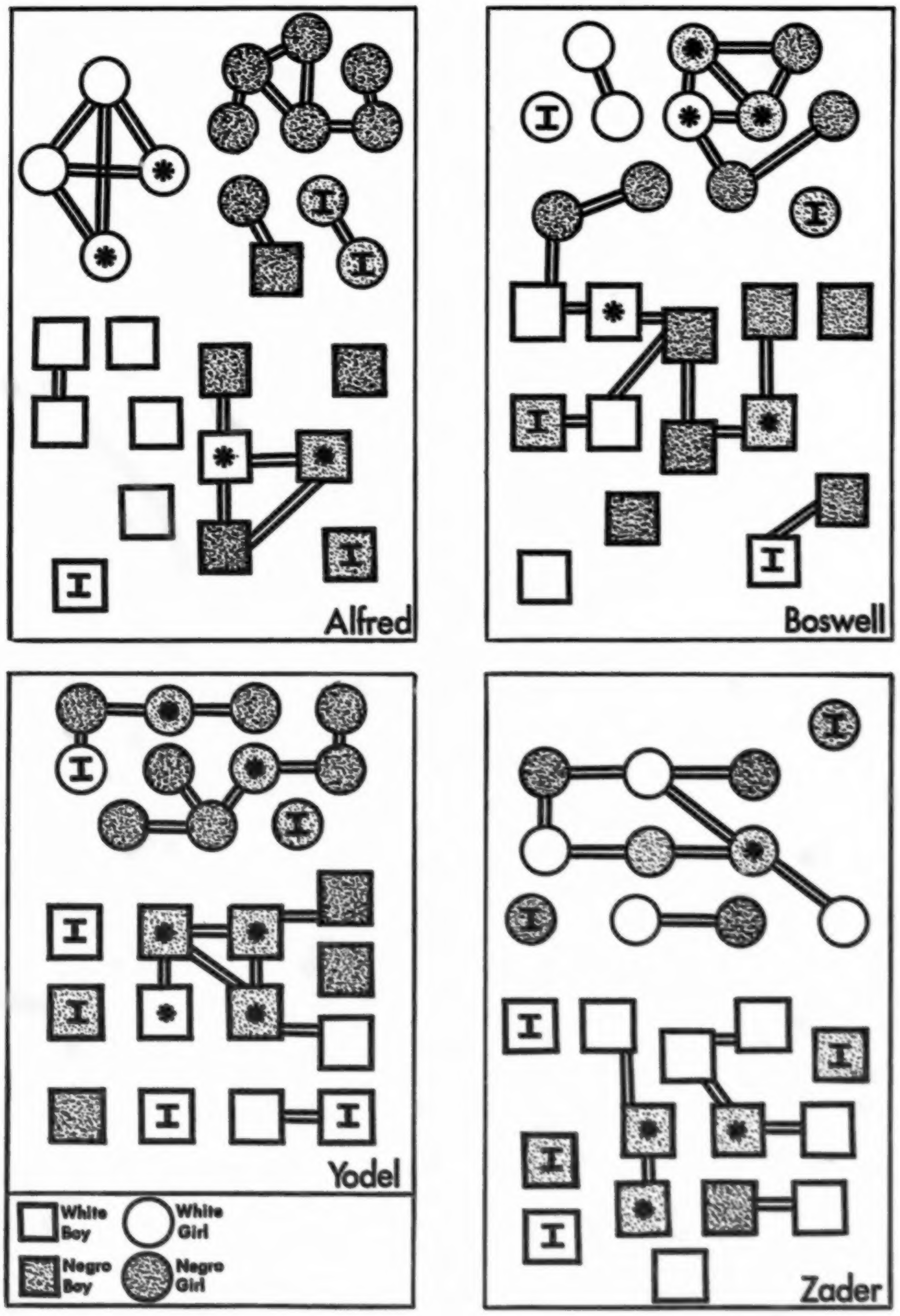
Despite this finding, the lower class gifted showed clear preferences for reading over the lower class average child. Both Frierson and Smith (1965) have reported advantaged gifted showing more creativity than disadvantaged gifted. Since this means primarily high language facility and fluency, such a result would not be unexpected.

One of the questions raised about recent efforts at desegregation is just how effective they are in changing the social relations between individuals. Janzen and Gallagher (1966) studied four classes in which talented students from deprived neighborhoods had been grouped together to determine the social impact of racial integration at the upper elementary school level. Katz (1964), for example, has concluded that white school children indicated a definite preference for their own racial group from an early age.

The students in this study were in the top 20 percent of ability level (median Binet IQ 110 to 119) from a culturally deprived area, the deprivation determined by father occupation and housing ratings. Names were solicited from the students for their preferred work, play, and social partners. There were substantial cross racial choices within the four classrooms, with local factors determining the nature and kind of such choices. With this group of potential leadership students from deprived neighborhood areas, physical proximity in the classroom was accompanied by meaningful social interaction. Whether such interaction could survive the growing cultural and peer pressures of the adolescent society is another question.

Figure 4

Patterns of Sociometric Choices in Four Classrooms


Alfred
Boswell
Yodel
Zader
White Boy
White Girl
Negro Boy
Negro Girl

From Janzen and Gallagher (1966).

Karnes, Zehrbach, Studley, and Wright (1965), using the same general sample as reported in the Janzen and Gallagher study, divided these children in the top 20 percent on intellectual measures into upper lower class and lower lower class families. Both these groups were performing substantially below their predicted achievement levels on the bases of standard achievement expectancy formulae. Additional negative information on family interaction with the child implied the need for a much more heroic educational program to be established early in life for the disadvantaged.

The literature of the characteristics of the talented student who comes from lower class areas is disturbingly sparse. What it does suggest is that these youngsters differ from both the average and the upper middle class gifted students and that educational adjustments need to be made to take cognizance of that difference.

Implications for Education

One of the things that we need to learn is that the educational planning designed for a diverse citizenry should reflect that diversity. It is a hard lesson to learn, and there does not seem to be much transfer of training. Because the mean IQ of disadvantaged groups is 85, we should not pretend that one program geared to that 85 IQ child fulfills our education responsibilities—any more than planning one curriculum for the 100 IQ child and calling it American education fulfills our responsibilities. The youngster who has talent and is two standard deviations above the mean of his subgroup requires special educational opportunities just as much, and probably more, than the National Merit Scholarship students. Such an education should start early and take into account both the special conditions of his environment and his giftedness. Not many educators have spoken on this problem and those who have are usually practitioners rather than researchers.

Riessman (1962) has summarized the differences in learning style shown by the culturally disadvantaged:

1. Physical and visual rather than aural.
2. Content centered rather than form centered.
3. Externally oriented rather than introspective.
4. Problem centered rather than abstract centered.
5. Inductive rather than deductive.
6. Spatial rather than temporal.

7. Slow, careful, patient, persevering (in areas of importance) rather than quick, clever, facile, flexible.

These characteristics carry many implications for differential curriculum programing for talented youngsters who come from disadvantaged circumstances. What is essentially being presented via such a list is the portrait of a visual, rather than an auditory, learner. The auditory learner can use a linguistic system to hold some ideas and concepts in mind while actively working on related ones. Auditory learning is the mark of the theoretician, the fully arrived intellectual, who does not have to refer back to concrete events to pursue important lines of thought.

While the curriculum for the talented deprived youngster needs to be formulated in the visual and limited temporal style to deal with the youngster as he is, the goal should be to progressively lead the youngster who has intellectual talents into an auditory mode where he can live in the ocean of ideas without having to constantly snorkel his way back to the surface of reality. The ocean of ideas that he swims in should be a familiar ocean, and the problems should be built around his experiences, at least at the elementary level. If he must learn about neighbors, let it be neighbors in surrounding New York or rural North Carolina and not Eskimos or Ecuadorans. The concept of an interdependent society and world can start from the child's own experience.

Taba and Elkins (1966), in discussing differential strategies for the culturally disadvantaged students, suggested that the educational program must take into account the deficiencies of their past family and social environment.

> Yet, for culturally deprived children, school must first both supplement and counteract their social learning if they are to have an equal opportunity to learn. School must also fill the gaps left by inadequate social learning at home and bridge the conflict between the culture of the home and that of the school [p. 16].

Goldberg (1963) has pointed out the lack of research in educational adjustments and has suggested several experimental approaches that might be used to explore environments more conducive for learning for the disadvantaged. Among those suggested were the possibility of using the primary grades as preparatory to formal instruction to remediate or fill up gaps in the child's development and to consider separation by sex, adaptation in curriculum materials, the use of tangible rewards, motor oriented teaching, etc. The need for more creative approaches to these problems beyond the redundancy of Operation Headstart and Higher Horizons is clearly needed.

We have not been overburdened with new educational ideas, concepts, or models in this area. Hillson and Myers (1963) have reported on the Demonstration Guidance Project in New York that became the Higher Horizons project one of the first educational efforts to improve the educational status of talented youth from disadvantaged circumstances. The results of these efforts have been reported as positive, particularly as it concerns improved motivation, reduction of failure, and helping students to continue within the educational stream.

Other similar projects have been developed, such as Project Upward Bound, which uses the summer to help students correct academic deficiencies and provide them with inspiration to continue further. Massive attention of almost any sort can provide for increased student motivation. The advantages of such programs can be maximized by providing a sound educational program fitting the needs of the disadvantaged. More sound experimentation with different models is clearly called for.

The Disadvantaged Social Scientist

Deprivation is always relative. Many persons that we call disadvantaged would not be so considered in other parts of the world, or in other times. The lack of a usable and flexible linguistic system is a substantial disadvantage in modern society. The social scientist can also be considered disadvantaged by the fact that the conceptual system that he has traditionally used to describe the world is as inadequate in its way as the linguistic system of the rural southern Negro is to a complex industrial system. The social scientist still tends to conceptualize in terms of bivariate relationships rather than multivariate relationships. He, thus, confuses himself and his public by his results, reported as if the world he studied was a bivariate world.

If we accept being poor as the crucial factor in being disadvantaged, we are confused when Sam Levenson tells us how wonderful it was to be brought up in a poor family. If a broken home is the crucial factor, how come so many productive people come from broken homes? Etc., etc., etc. Let us not be too quick to discard an idea because of some exceptions to a bivariate hypothesis. It may be more productive to modify the nature of the hypothesis-making itself.

Everything that we know tells us that complex behavioral outcomes such as school or societal success are the results of the complex interaction of many variables, and that the mix of these variables can vary itself from one case to the next. It is not hard to accept this point, almost a social science cliché, but there are many implications flowing from this idea that are obscured.

An examination of Figure 5 shows how incorrect generalizations may be drawn by paying attention only to the relationship of outcome and one variable. Following are examples of such generalizations:

Pete and Joe come from the same poor social environment but perform differently in school; so, environment can't be important.

Sam and Pete go to a better school than Joe but Joe does better; therefore, schools are not important.

Joe's family cares very much about motivating him to achieve. Bob's family cares very little about it, but Bob performs better; so, family goals can't be too important.

Figure 5

Hypothetical Weighting of Factors in School Success

	Phenotypic Intellectual Heredity	*Social Class and Wealth*	*Family Goals*	*School*		*School Success*
Sam	+10 unks	−30 unks	−20 unks	+10 unks	→	−30 unks[a]
Pete	−40 unks	−10 unks	+10 unks	+10 unks	→	−30 unks
Joe	+20 unks	−10 unks	+40 unks	−20 unks	→	+30 unks
Bob	+20 unks	+10 unks	0 unks	+20 unks	→	+50 unks

[a] "Unk" is a hypothetical unit of measure relating to school success.

If we include intervention to change some of these values, we can run into the same kind of interpretation. For example, we can change the school +10 unks (no mean feat) and still leave Sam and Pete at −20 unks, leading some people to say that it doesn't pay to try and improve the schools. Attempted improvement along other dimensions can meet the same arguments.

A more productive research and educational model can be constructed around the total push concept from psychiatry. In this instance, the psychiatrist accepts the multivariate nature of patient adjustment and tries to modify simultaneously all relevant factors. A similar research conceptualization can serve the talented disadvantaged, a group that should produce the next generation of leadership for important subgroups in our society, if we can provide the stimulation of appropriate and worthwhile education.

References

Cole, C. C. Jr. *Encouraging scientific talent.* New York: College Entrance Examination Board, 1956.

Coleman, J. S., Campbell, E.G., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., and York, R. L. *Equality of educational opportunity.* Washington: US Government Printing Office, 1966.

Deutsch, M., and Brown, B. R. Social influences in Negro-white intelligence differences. *Journal of Social Issues,* 1964, **20**, 24-35.

Frierson, E. C. A study of selected characteristics of gifted children from upper and lower socioeconomic backgrounds. Unpublished doctoral dissertation, Kent State University, 1964.

Gallagher, J. J. *Research summary on gifted child education.* Springfield, Illinois: Department of Program Planning for the Gifted, 1966.

Ginzberg, E., and Bray, D. *The uneducated.* New York: Columbia University Press, 1953.

Goldberg, Miriam. *Research on the talented.* New York: Bureau of Publications, Teachers College, Columbia University, 1965.

Goldberg, Miriam. Factors affecting educational attainment in depressed urban areas. In A. H. Passow (Editor), *Education in depressed areas.* New York: Teachers College Press, 1963. Pp. 68-100.

Hillson, H. T., and Myers, Florence. *The Demonstration Guidance Project, 1957-62.* New York: Board of Education, 1963.

Iscoe, I., and Pierce-Jones, J. Divergent thinking, age and intelligence in white and Negro children. *Child Development,* 1964, **35**, 785-797.

Janzen, Verna, and Gallagher, J. J. The social choices of students in racially integrated classes for the culturally disadvantaged talented. *Exceptional Children,* 1966, **33**, 221-226.

Jenkins, M. D. The upper limit of ability among American Negroes. *Scientific Monthly,* 1948, **66**, 399-401.

Karnes, Merle, Zehrbach, R. R., Studley, W. M., and Wright, W. R. *Culturally disadvantaged children of higher potential: intellectual functioning and educational implications.* Champaign, Illinois: Champaign Community Unit 4 Schools, 1965.

Karp, Joan, and Sigel, I. Psychoeducational appraisal of disadvantaged children. *Review of Educational Research,* 1965, **35**, 401-412.

Katz, I. Review of evidence relating to effects of desegregation on the intellectual performance of Negroes. *American Psychologist*, 1964, **19**, 381-399.

McClelland, D. C. *The achieving society*. Princeton, New Jersey: Van Nostrand, 1961.

Miller, Theresa M. A search for talent in economically distressed areas. *Gifted Child Quarterly*, 1964, **8**, 179-180.

Pettigrew, T. Negro American intelligence: a new look at an old controversy. *Journal of Negro Education*, 1964, **33**, 6-25.

Plaut, R. L. *Blueprint for talent searching*. New York: National Scholarship Service and Fund for Negro Students, 1957.

Riessman, F. *The culturally deprived child*. New York: Harper and Row, 1962.

Rohrer, J. H. The test intelligence of Osage Indians. *Journal of Social Psychology*, 1942, **16**, 99-105.

Rosen, B. C. Race, ethnicity and the achievement syndrome. *American Sociological Review*, 1959, **24**, 47-60.

Smith, R. M. *The relationship of creativity to social class*. US Office of Education Cooperative Research Project Report No. 2250. Pittsburgh, Pennsylvania: University of Pittsburgh, 1965.

Strodtbeck, F. L. Family interaction, values and achievement. In D. McClelland, A. Baldwin, U. Bronfenbrenner, and F. Strodtbeck (Editors), *Talent and society*. Princeton, New Jersey: Van Nostrand, 1958.

Taba, Hilda, and Elkins, Deborah. *Teaching strategies for the culturally disadvantaged*. Chicago, Illinois: Rand McNally, 1966.

CHAPTER 5: CONTRIBUTIONS OF PROGRAMS FOR CHILDREN WITH LEARNING DISABILITIES

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The sources of information in this paper have been taken from the current literature on compensatory education for preschool disadvantaged children, from remediation programs for adolescents in disadvantaged areas, and from applied procedures involving response and consequence contingencies. The focus has been drawn from the requirement to specify the application of special education procedures and programs to exceptional children who also meet the social, economic, and life style criteria established for the disadvantaged. A further concern is an examination of the effects of contingency control upon a child with severe learning disabilities from a low socioeconomic environment.

Introduction

The disadvantaged, it has been said, are those who lack the readiness, the motivation, or the value systems to accommodate the changes demanded by the present society. They are those who have a limited potential for achievement mobility. Their skills for survival remain fixed, even as their environments broaden and grow. They function inadequately or achieve only minimally in social, economic, or intellectual areas. The language of the disadvantaged has been characterized as restricted in form and highly repetitive. Their problem solving processes have been classed as rigid, their methods as stereotyped. The perceptual styles of disadvantaged children have been judged at best inadequate, at worst irrelevant to the demands made upon them. Any or all of these real or inferred characteristics are associated presently with the label "disadvantaged," and as any review of the literaure will show, this list is only partial.

While there have been few restrictions on labeling this population, there have been even fewer limitations on remedial operations designed to remove the label. Mass efforts have been pointed toward giving these youngsters a "Head Start" or "Higher Horizons," or lifting them by their "Bootstraps," all similar in providing environments artificially enriched and expanded in comparison with the child's natural, disadvantaged environment. Implicit in this environmental extension and enrichment is the assumption that the more advantages, the fewer deficits, with change occurring in a positive direction as a function of the presence or absence of the complex environments surrounding the average child during early development.

As outcomes of these compensatory programs, it is a matter of fact that many changes have occurred, that certain insights have been reached, that many behaviors have been modified. Yet it has been noted also that these changes are too few in number, too slow in rate, too open to doubt (Cohen, 1967). Massive remedial operations for children labeled as having globally defined differences have been disappointing.

This assertion has been forcibly brought to the attention of educators in current reviews of compensatory education, such as the one by Gordon and Wilkerson (1966). They have written:

> The appropriateness of a practice or the success of a program cannot be adequately judged from the enthusiasm with which it is embraced or the speed with which the practice spreads. Educational innovation, unfortunately, has too long a history of approaching evaluation and decision making on such an inadequate basis. At the very least, evaluation of newly introduced educational practices would seem to require a precise description of the specific conditions under which they are initiated, and of the populations to whom they are applied; the careful identification of target populations and of appropriate control groups for whom specified criterion measures are established; and the collection and analysis of data appropriate to the measures identified. Despite the almost landslide acceptance of the compensatory education commitment, we find nowhere an effort at evaluating these innovations that approaches the criteria suggested. Where evaluative studies have been conducted, the reports typically show ambiguous outcomes affecting unknown or amorphous educational and social variables [pp. 156-157].

The demand for careful identification of target populations, it has been suggested, is not met by practices which include speculation. The further demands for a specification of outcomes which are not ambiguous and manipulatable variables that are not amorphous raise new issues. Pertinent to this set of new considerations is the enriched environment provided in many compensatory education plans, as well as the methods by which environmental complexities are utilized. Gordon and Wilkerson (1966) have continued their criticism, noting that there is an "absence of anything really new or radically innovative in our (remedial) pedagogy [p. 171]," and, again, "that the increased stimulus environments which have been the basis of the majority of compensatory programs are only those which should have been introduced earlier [p. 170]."

Is it lack of control, as Gordon and Wilkerson seem to be saying, in definitions, specifications, and prescriptions which have consigned many remedial programs to ambiguous or amorphic categories? In a search for answers, consider first the stated goals for any project for the disadvantaged. Optimally, goals define specific objectives, their means of attainment, and acceptable ranges and conditions of occurrence. As Mager (1962) reminds us, "If you're not sure where you are going, you're liable to end up someplace else [p. x]." Sureness in where we are going, then, demands precise destinations defined in terms of behaviors—behaviors that are observed, measured, and recorded over a period of time. Specification, definition of target behaviors, their observation, measurement, and recording can pinpoint many of the global goals now amenable to assessment only by inferential statements. Specific behavioral goals can eliminate ambiguity and provide the basis for objectivity.

The process of setting behavioral goals for the disadvantaged is not new to urban centers throughout the country. New York, Chicago, Cleveland, or Los Angeles have had more than a decade of experience with pupil populations from varied ethnic backgrounds, children whose prevailing way of life marks them as candidates for the disadvantaged label. Goals for these youth of adolescent age have been put into practice with work study projects, neighborhood youth corps, or community action programs. In most of the cities, this remedial effort is not confined to training in marketable skills, but also includes those academic skills requisite for marginal functioning.

A program representing the planning of a majority of community school efforts for the dropout adolescent youth is that of the Orange County Project in California. Here target behaviors were identified as "confidence in the use of language," "ability to verbalize ideas," and "improved communication skills." A primary means for reaching these and similar objectives in the California study was an analytical approach to problem solving, one which emphasized a sequential approach with daily success for each student, together with a full range of individual counseling services. Pre- and posttesting of academic behaviors and an expanded selection of job choices were cited as the means of evaluating the results of the remedial effort. An "increase in academic ability in English, reading, writing, spelling, and mathematics" together with a "phenomenal growth in self-confidence and self-realization" and changes in behaviors and dress have been reported as the behavioral outcomes.

Certainly no one would question the ultimate desirability of goals such as these, nor would they fail to praise the outcomes. If goals and results are somewhat all encompassing or somewhat amorphous, there nevertheless has been a move toward objectives in behavioral terms, a recording of the precise method and specification of certain learning experiences by which these objectives were attained, and the use of measurement and recording of behavioral changes. However, the use of academic achievement tests restricted to those standardized on normal populations has received its share of criticism too. Harsh (1967) has pointed out certain inadequacies in achievement tests and called instead for the

> systematic development of an observation process which explicitly predefines the time, circumstances, situation and behavior that will be observed (with) as high reliability and as great validity for the questions that are to be judged or evaluated as some of the standardized instruments [p. 457].

Following Harsh's suggestions, then, a predefinition of goal behaviors and the methods by which they are attained is not enough. There must also be specified behavioral rate and the circumstances under which goal behaviors may be expected to occur. In this second step toward functional evaluation of compensatory programs, measurement precision beyond that of achievement tests has been demanded. And since the goals have been cited as behaviors, it is the measurement of behaviors through time which shows promise as one means of removing the charge of ambiguity.

Objectivity and Contingency Control

How does one go about setting goals and objectives in such a way that behavioral measurement may occur by evaluative means other than samples of standard tests? One feasible solution to the problem has been offered by a Kansas City project similar in both purpose and treatment population to the California project. The Juniper Gardens District in Kansas City, Kansas, recently initiated multiple remedial projects with disadvantaged youngsters, on the basis of economic level, social organization, and minority racial composition.

That study specifically concerned with high school dropouts identified its experimental and control population from members of the already existing Neighborhood Youth Corps. The experimental or classroom group worked in a remedial classroom setting on instructional material during the morning and at various jobs in the afternoon, while the control or job group was placed at jobs throughout the day. The program incorporated a token reinforcement system for academic behavior which was integrated with the payment practices of the Neighborhood Youth Corps. For the experimental group, pay was contingent upon completion of not only the job in the afternoon, but also upon academic functioning in the morning. Specific academic goals called for lessons to be completed with an 80 percent correct criterion, with only half credit given for corrected work. Content areas emphasized reading, social studies, arithmetic, and science, with instructional materials chosen from those commercially available. The level of materials was raised progressively at the same time that points negotiable for wages were allotted on a gradually decreasing scale. Clark, Lackowicz, and Wolf (N.D.) report that "the overall remedial program substantially increased the academic skills of the students in a relatively short period of time," citing significant changes in the levels of functioning as measured by the California Achievement Test. The median increase for the job group was 0.2 years; for the classroom group an increase of 1.3 years was recorded simultaneously. Standardized tests as measurement devices in the Kansas study were supplemented with ongoing response counts through time. Cumulative response records for each individual student made it possible to evaluate not only the total program, but also such highly individual and specific variables as change in point contingencies according to various academic choices. Less preferred activities in which a student was most in need of remediation were programed for a higher ratio of reinforcement to the point where it became the most desirable activity, and consequently produced both increased response rates and subsequently higher achievement levels.

In reviewing the Kansas and California programs, many strengths are readily evident. Both programs identified their target populations objectively, specified their goals, defined their methods, and provided some form of behavioral measurement. Both programs provided the advantaged environment which has become a prescriptive basis for compensatory education plans. Yet between the two learning environments reviewed, there is a major difference, a difference of contingency control.

In the Kansas study, for example, the points, the pay, and the increased opportunities for learning, working, and spending were all contingent upon the student's responses. An adequate response on the part of the student was followed by what proved to be reinforcing consequences. Within the confines of the classroom and on the job, stimulus control of behavior was achieved. That behavioral changes were under stimulus control was verifiable through the manipulation of the program and the consequences. Lack of this same control of the contingencies of responding in a learning environment similarly enriched produces nonspecific outcomes. Changes in behavior may be noted, but their precise relationship to manipulatable variables is not known. Environmentally controlled contingencies will supply this information. Loading an environment and bombarding the child with stimuli may or may not produce behavioral changes in the expected direction. Contingency control of the environment provides the basis for an effective, verifiable, replicable behavior modification plan.

Perhaps even more urgent than work with the adolescent, however, is the planning that has taken place in work with preschool youngsters from deprived areas. Direct environmental effects of substandard housing, inadequate nourishment, family structure, and experiences have been well documented. While nothing in this paper should be taken to suggest anything other than an expenditure of major effort in ameliorating conditions which have become breeding grounds for learning problems, the sheer magnitude of the task suggests that preschool efforts with the child will be needed for some time to come.

More often than not, compensatory preschool programs, like their adolescent counterparts, have offered enriched learning environments on the assumption that increased environmental complexity will help the child make up for lost time developmentally. Participating children are exposed to what seem to be the advantages of a middle class learning environment—the clay, the paint, the trips to the zoo.

Certain cities have extended environmental advantages to include the parents. San Diego, for example, has organized classes in child growth and development, emphasizing training in family health and family social habits. With two sessions per week for the parent and three for the child, the assumption is that such new learnings as following directions, sharing, and good health and social habits are gained more quickly and maintained longer because of the home use of the school learning (Crow, Murray, and Smythe, 1966).

Reinforcement Principles in Preschool

The problems of extending compensatory environments to include all the variables that may affect the disadvantaged child's inadequate school functioning have been met with a different approach in an experimental preschool in Illinois.

With the basic assumption that the disadvantaged preschool child does not, and will never have, precisely the same repertoire of entering behaviors or life experiences by the first grade as his upper middle class counterpart, Bereiter and Engelmann (1966) have designated the primary target behavior for the disadvantaged child as "how to act in an entirely new situation [p. 41]." From such a base, a task analysis approach has been employed whereby specific behaviors demanded by first grade curriculum are specifically programed. For example, it was not enough for the Illinois staff to conclude that the disadvantaged child's learning disabilities are based on language differences. Those differences were identified precisely, and from them minimum goals were obtained. Acknowledging that such a procedure is a radical departure from the traditional concept of a preschool as a kind of psychotherapeutic way station, the Illinois group based their early direct instruction approach on a rationale similar to that which has long been acceptable in compensatory education for deaf youngsters. The reasoning is that if direct instruction benefits the child most seriously disadvantaged by deafness and language deficit, then it may benefit the child whose disadvantages are largely those of language. For those who have not yet read Bereiter, Engelmann, and Osborn's (1966) accounts or Pines' (1967) review in *Harper's*, the answer to the question, "Does it work?" is, "It most certainly does." The teachers work, the children work, and the program works. At the conclusion of an intensive, fast paced, task oriented, reinforcement program, the results showed that by traditional evaluative instruments, the experimental group was at or above beginning first grade level in actual skill attainment. The authors (Bereiter and Engelmann, 1966) note that this successful experimentation followed "two years of experimentation with a more traditional activity oriented preschool program which produced disappointing results quite typical of those achieved in other such experiments [p. 55]." Those concerned with broader needs have questioned whether direct instruction produces undue anxiety, whether a task oriented approach neglects the affectional needs, or whether transfer or generalizing takes place. For these and similar questions, the Illinois project answers with evidence for affectional relationships of mutual respect, for a transfer of academically oriented training to adequate first grade functioning, and to "large gains made by children . . . on tests that require generalization far beyond the tasks that were taught [p. 61]."

The principles that Bereiter and Engelmann (1966) have set forth in their highly provocative account are these:

First, "Reward the child who tries," and "avoid rewarding undesirable behavior [p. 81]"—a sequence of gradual approximations in the behavioral shaping process. Unlike a testing or a right or wrong teaching sequence, to reward the child who tries does not mean that the first trial must be a performance of the terminal objective. It means only that the child must try, and that he must be kept trying. This, in other words, is an educational translation of reinforcement of gradual approximations, as applicable on the preschool level as it is with the adolescent.

Secondly, "avoid shaming and coaxing [p. 82]," an injunction which may exemplify what Gordon and Wilkerson (1966) have referred to as only doing that which should have been done long ago.

Next, emphasize "rules of behavior that must be maintained [p. 83]," not a child's personal adequacy or inadequacy.

And finally, "exploit work motives [p. 84]" providing immediate confirming knowledge to the child of the rightness of any response.

In these injunctions, Bereiter and Engelmann have applied within a teaching context only well substantiated behavioral laws. By these principles, the learning environment of the child is controlled through a programing of behavioral competencies. The major difference in the two preschool learning environments is not a reduction of stimuli, but control of stimuli—control of response produced contingencies. Emphasizing situational factors has allowed a sequential continuum of reinforcers to establish behavior—from the juice at snack time to the traditional social reinforcers of the teacher smile or praise. It has been demonstrated that these principles of reinforcement established systematically in the experimental psychology laboratories have application in the classroom and provide an effective basis for instructional procedures.

A Behavioral Case Study

Instructional precision yielded by shaping responses with the application of reinforcement contingencies is exemplified in the case study of Danny, a child enrolled in the University of Washingon's Experimental Education Unit (Haring and Lovitt, 1967).

When Danny was referred to the Experimental Education Unit, his behavior bore many labels. On the authority of medical and psychological diagnosis, Danny was a disadvantaged child. He was disadvantaged with respect to his ability to conform and with respect to social and interpersonal relations. It was suggested too that Danny may have been a disadvantaged product of a disadvantaged background. As a result, by the time Danny came to the Unit he carried with him such behavioral tags as "unmanageable," "hyperactive," "mentally deficient," or the product of causes "unknown."

By empirical criteria the disadvantaged label was even more applicable. If Danny's family were members of the Great Society, it was not readily apparent. A modest home supported with a meager income from the janitorial services of the parents had deteriorated progressively into a slumlike dwelling—all as a result of the difficulty of containing this one child. Windows had been boarded over; floor coverings had been ripped and torn; doors which had withstood the onslaught of Danny's violence were boarded or fastened high; sagging cabinets were padlocked—all tangible testimony to a variety of destructive behaviors that formed the greater part of Danny's repertoire.

Upon referral to the Unit, however, analytic interest was centered not on the labels which Danny bore but upon the child's emitted behavior. With such an analysis as a starting point, functional plans for the child's future proceeded. Because of Danny's erratic, random, variable motor behaviors, no medical or psychological diagnosis had supplied conclusive evidence of the child's abilities. Still in question were the child's ability to hear, his ability to react to stimuli in the environment, and his ability to learn anything beyond walking, reaching, and manipulating.

In the beginning of the behavior analysis, there was no attempt to arrange an environment for behavioral control. The only relationship between behavior and the environment was a search for a possible reinforcing stimulus with which to initiate behavioral modification. Such a stimulus was identified in the form of a record player, and in this manner control of the environment was instituted. With a record player, which seemed to have a reinforcing function as far as seconds of attending behavior were concerned, behavioral modification was put into effect. Danny's daily hour at the Unit was arranged so that access to a record player followed only upon the emission of a desired behavior. Sitting was the first stage designated in the terminal behavior chain. As a result, the record player was produced by the teacher only as a consequence of the child's sitting. The terminal goals for Danny were as specific as those in the Illinois or Kansas study, but far lower in a hierarchy of a response repertoire. With Danny the program called for a progression of simple tasks: to sit in a chair on command, to sit in one of two chairs, to attend to a task, and to perform a task—all in a chained sequence.

Unusual in this instance was the lack of satiation effect of the record player which served as a reinforcer. For the three months that Danny was enrolled in the Unit's behavioral analysis classroom, the record player continued to serve a reinforcing function. The child learned to be seated, to attend, to perform, all as a result of control of environmental stimuli.

By increasing the environmental structure, the experimenter was able to increase control over Danny's responses as he proceeded through the shaping sequence. For example, the distance between two chairs was increased, requiring Danny to make an even finer distinction between one of several chairs prior to the introduction of a chair at a desk. The chairs were fastened in such a way that no action of Danny's could bring them closer. The record player consequence was removed step by step toward token reinforcement, first by the insertion of a lock and key in the sequence, and eventually by the presentation of a token preceding the acquisition of the key. The precision in dispensing reinforcers necessitated in the shaping process was thus gained through a shift to a conditioned reinforcer.

In addition, control was extended to progressively lengthen the time schedules. Measurement of the various areas of control was provided by data gathered first by observers, then through automation. In the final stages of analysis, the teacher was able to record his instructions, the discriminative stimuli preceding a response, by means of an ultrasonic transmitter which relayed the signal to an event pen recorder. Moreover, the chairs were rebuilt to accommodate a pressure sensitive device which detected and relayed to the event pen recorder the number of seconds Danny sat within a specific time span. With refined measurement devices such as these, the gradual increases in target behaviors were recorded and verified.

From chairs fastened in a stationary position close to the reinforcer, to a chair at a desk removed from the reinforcer in terms of space and time, the behavioral chain progressed. As the process of behavioral modification with a structured, controlled environment continued, it was evident that Danny could learn the differential effects his performance had on the environment. The task became progressively more complex, placing one piece in a puzzle, then two, and simultaneously there was a gradual lengthening of attending behavior, and a diminishing amount of time was being spent with the reinforcer.

Conclusions

In review, note that this child with serious disorders in learning and serious disadvantages was placed in a richly expanded environment. In such an environment, as well as in deprived environments, relationships between behavior and its consequences are complex. In the past, it has been common practice to meet any behavioral deficiency with the addition of more antecedent stimuli and more consequences building more complex relationships. As a result, outcomes often have been difficult to relate or difficult to assess. For the compensatory education of the disadvantaged child in general, this description seems to hold.

For Danny in particular, an enriched, expanded environment has been the basis of the remedial technique, with one important addition—that of control of the contingencies of responding. The remedial environment in which the simple fact of Danny's ability to learn was established without question was one in which the structure of control was evident. The relationship between a behavior and its consequences was made clear. That development of stimulus control of behavior can teach the child to attend to the differential effects his performance may have on the environment was shown once again, for the records show a rapid increase of appropriate behavior and the simultaneous decrease in inappropriate behavior. The records show also that there was no reduction in environmental stimuli in the learning environment; on the contrary, there was added the one important variable of control.

Modifying behavior is very much the business of education. Behavior that is labeled "disadvantaged," "disabled," or "disordered" is amenable to the programed control of the learning environment. Without control, modification proceeds slowly, if at all. With control, educational limits for many, if not most children, have yet to be set.

References

Bereiter, C., and Engelmann, S. *Teaching disadvantaged children in the preschool.* Englewood Cliffs, New Jersey: Prentice-Hall, 1966.

Bereiter, C., Engelmann, S., Osborn, G., and Reidforn, P. A. An academically oriented preschool for culturally deprived children. In F. M. Hechinger (Editor), *Preschool education today.* New York: Doubleday, 1966. Pp. 105-135.

Clark, M., Lackowicz, J., and Wolf, M. *A pilot basic education program for school dropouts incorporating a token reinforcement system.* Lawrence, Kansas: Bureau of Child Research, University of Kansas, N.D.

Cohen, S. A. Some conclusions about teaching reading to disadvantaged children. *The Reading Teacher,* 1967, **20**, 433-435.

Crow, L. H., Murray, W. I., and Smythe, H. H. *Educating the culturally disadvantaged child.* New York: David McKay, 1966.

Gordon, E. W., and Wilkerson, D. A. *Compensatory education for the disadvantaged, program and practices: preschool through college.* New York: College Entrance Examination Board, 1966.

Haring, N. G., and Lovitt, T. C. Operant methodology and educational technology in special education. In N. G. Haring and R. L. Schiefelbusch (Editors), *Methods in special education.* New York: McGraw-Hill, 1967. Pp. 12-48.

Harsh, J. R. Evaluating ESEA projects for the disadvantaged. *Educational Leadership,* 1967, **24**, 453-461.

Hechinger, F. M. (Editor). *Preschool education today.* New York: Doubleday, 1966.

Hickman, R. S. The dropouts did come back. In J. C. Gowan, and G. D. Demos (Editors), *The disadvantaged and potential dropout.* Springfield, Illinois: Charles C Thomas, 1966. Pp. 402-411.

Mager, R. F. *Preparing instructional objectives.* Palo Alto, California: Fearon, 1962.

Pines, Maya. A pressure cooker for four year old minds. *Harper's Magazine,* 1967, **234**, 55-61.

CHAPTER 6: CONTRIBUTIONS OF PROGRAMS FOR THE MENTALLY RETARDED

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During the past century, children who could not derive maximum benefit from attendance in regular school classrooms have been provided with increased special education programing. Although the initial growth of special education was slow, the past decade has produced a rapid acceleration of the kind and amount of special treatments available. Much attention has recently been focused on the problems of the socially disadvantaged, particularly the young children trying to function within our schools.

In fighting the war on poverty, we are attempting to make revolutionary changes in our social structure through legislation and friendly persuasion. We are trying to integrate a large minority of socially and economically underprivileged people. To do so, we have undertaken many lines of attack, but the key to success is through improved education. Success in reducing the effects of social disadvantages is contingent upon reforms in the education of the socially disadvantaged. When education of any group is inferior or inadequate, social inferiority is virtually guaranteed. Highly controlled research is not required to point out that traditional educational methods have not been able to cope with the problem. New York, for example, spends $200 more per pupil on the slum child than it does on the average child; yet, Francis Keppel, former US Commissioner of Education, made the observation that "education in central Harlem is marked by massive educational deterioration." We need to add new dimensions to the education of this group by analyzing the root of the slum child's learning deficiencies and devise efficient and effective means to compensate for them.

In examining the traits of socially disadvantaged children, educators and psychologists often are struck by the strong similarities that exist between this group and another group of disadvantaged children, the mentally retarded. In fact, there is a strong relationship between the incidence of mental retardation and its concentration in low socioeconomic areas. Havighurst (1964) reported this fact in a comprehensive study of Chicago. A similar situation is shown in the Onondaga County study of New York (Kirk and Weiner, 1959). Wirtz (1966) states that estimates of the number of children in the 70 to 80 IQ range coming from socially disadvantaged homes are in excess of 50 percent. Because of the many similarities confronting both groups, Erdman and Olson (1966) said that "as educational programs for the culturally disadvantaged and the retarded continue to develop, the evidence to date suggests the need for closer articulation between the two areas [p. 311]." If this is true, then logic dictates the examination of those concepts and procedures which tend to be successful with the retarded and the testing of their application to the socially disadvantaged.

In this paper, we shall review the history in the education of the retarded and consider how it relates to the socially disadvantaged, discuss the mutual characteristics of both groups, and then look at the practices and procedures employed in special education classes for the mentally retarded that might effectively be applied to the education of the socially disadvantaged.

History

Of the two groups, the mentally retarded and socially disadvantaged, the mentally retarded was the first to receive consideration for extended special treatment. Itard (1932), a Frenchman, published the first written description of an educational experiment with a severely retarded boy in 1806. In 1837, Edward Seguin, under the guidance of Itard, began a teaching experiment with severely retarded children that led to the establishment of an organized educational program for the mentally retarded. In developing his program, Seguin made several observations with respect to learning which have validity in today's programs for the retarded and the deprived. They are:

1. That observation of the individual child preceded and was the foundation for the child's education.
2. That education dealt with the whole child and that material taught must likewise be kept whole.
3. That activity was the basis for and the means of learning, and that sensory learning was included in activity.

4. That the child learned best and most economically from real things, and that he remembered in proportion to his opportunity to compare (Kirk and Johnson, 1951).

In the last decade of the 19th century, Dr. Maria Montessori of Rome worked with mentally retarded children in institutions for the mentally ill. She believed that the major emphasis of their treatment should be educational rather than medical. Dr. Montessori obtained a copy of a book written by Seguin, translated it, and reconstructed methods and materials described therein. Applying this program to retarded children, she was able to teach them sufficiently well for them to pass state examinations with scores higher than many of their normal peers.

Shocked by these results, Dr. Montessori reasoned that if her methods could produce such remarkable results with retarded children, they should be equally efficient with normal children. Hence, she developed the "Case Dei Bambina," a school for young normal children of working mothers living in a tenement district of Rome. This is an excellent example of principles and practices, developed in special education for the retarded, applied to the education of the socially disadvantaged.

In 1915, Dr. Montessori made headlines lecturing in the United States on her revolutionary educational methods. Although her ideas were meteoric in their public appeal, they went into a rapid eclipse because her program was not popular with American "progressive" oriented educators. Fifty years later, her ideas became popular again, particularly in private schools for children from more affluent homes. Recently, Orem (1967) edited a book which again applies Montessori's educational principles to the war on poverty. In the forward of the book, J.E.W. Wallin writes:

> Montessori, as no one else in her generation, deserves unstinting praise for having kindled new respect and reverence for the rights of the "submerged tenth," the deprived and handicapped children of the masses, an area of public concern which in our day has ballooned into a mighty surge [p. 10].

There are many aspects of the Montessori program that have value for all young children and are found today in many preschool and kindergarten classes. In her program, motor training, sensory training, language training, and an emphasis on self discipline are taught in a systematic sequential fashion. It may very well be that the Montessori Method will prove to be the strongest base we have for building preschool programs for the retarded or the disadvantaged.

Itard, Seguin, and Montessori, although medical doctors and not educators, pioneered in the field of educating the mentally retarded. Each of them was inspired by the sensationalist philosophy advocating that sensory training influenced the development of the central nervous system. Through bombarding the central nervous system with impulses, mental retardation could be reduced or cured. In developing his scale of intelligence, Binet also proposed that intelligence was educable. Despite the fact that scores of research studies (see McCandless, 1964, for a review) indicate that environment plays a major part in determining intellectual functioning, school programs for the retarded made few attempts, until this past decade, to modify intelligence.

Erdman and Olson (1966) report that from 1930 to the present time, educators primarily emphasized social and vocational adjustment in their curricula. Although the goals of the various programs did not differ greatly, these goals could be achieved in a variety of ways. Ingram (1935) proposed a unit method approach to correlate instructional activities around central themes; Duncan (1943) emphasized concrete activities as opposed to verbal activities primarily taught through a series of crafts projects, and Hungerford (1948) proposed a program of occupational education.

In reviewing the various types of programs employed to educate the mentally retarded, Erdman and Olson (1966) stated:

> Efforts to develop curricula have reflected a cognizance of the limited environmental backgrounds of many of the students. In a sense, these educational efforts could be described as compensatory in nature, for they are seeking to provide learning experience for children coming from backgrounds of environmental deficits [p. 311].

Two recent curriculum proposals, those of Illinois and of Cincinnati, base their curricular model on recurring life situations. Practical though these approaches may be, little concern was provided for raising the level of functional intelligence of the child.

In recent years, three approaches have appeared in the education of the mentally retarded which have produced from moderate to highly successful results. For the purpose of discussion, they will be handled separately, but in practice they are not mutually exclusive. Two of the approaches are concerned with specific learning disabilities and employ clinical type evaluation and diagnostic procedures to assess the strengths and weaknesses of a child. Once this assessment is made, a remedial program, tailor made to fit the needs and abilities of the individual child, is instituted. The third approach, although employing newer techniques, reverts to goals of our earliest pioneers in this field in attempting to modify intelligence.

Of the two clinical approaches, one proposes that many children have learning problems because of inadequate motor development reflected in faulty neurological functioning. This condition has been treated essentially in two different ways. Doman and Delacato (Delacato, 1963) treat educational problems physiologically by attempting to stimulate the central nervous system, the site of the problem, while Kephart (1960), Frostig (1964), and Getman (1964) attempt to concentrate on the manifestations of the conditions with remediation procedures. Unbiased controlled research must be conducted on these types of programs before their value can be determined. To date, emotionality, questionable research design, and poor reporting have helped to obscure the issues involved.

In the second clinical approach, the emphasis is on language. The development of the Illinois Test of Psycholinguistic Abilities (ITPA) developed by Kirk and McCarthy, provided the impetus for this approach. With this instrument, the tester can identify a child's strengths and weaknesses in each area of language. The teacher can then devise activities to strengthen weak linguistic functions or present learning material in such a way as to capitalize on the child's strong linguistic components. Proposed suggestions for a language program based on the ITPA have been made by Smith (1962), Olson, Hahn, and Hermann (1965), and Wiseman (1965).

The third approach, which is a resurgence of interest in the ability to train the intellect, received a strong push from the works of Strauss and Kephart (1955), Kirk (1958), Haeusserman (1958), Gallagher (1960), Cruickshank, Bentzen, Ratzeburg, and Tannhauser (1961), Birch (1964), and Frostig and Horne, (1964). Through their efforts, it was pointed out that subnormal intellectual functioning did not necessarily reflect subnormal intellectual potential. The strongest impetus for this approach probably came from the study by Kirk (1958), who attempted to investigate the effects of preschool training on the social and mental development of retarded children between the ages of three and six. Part of his sample resided in their respective communities and part resided in residential schools. Results of the study suggested that children from culturally disadvantaged homes benefited from the experience and demonstrated substantial gains in IQ functioning over their respective controls.

In summary, there have been several approaches to educating the mentally retarded, all of which bear some relationship to the education of the disadvantaged. In the beginning, emphasis was focused on reducing or eliminating mental retardation. Then a period of 50 years followed during which programs were primarily concerned with social and vocational adjustment. Recent developments have seen an emphasis on a clinical approach, analyzing strengths and weaknesses and developing activities for the individual learner, and a return to the idea of modifying intelligence.

Characteristics of the Mentally Retarded and the Socially Disadvantaged

Whenever educational programs are developed, the planners should consider the nature and needs of the persons to be educated. In developing their curriculum for the mentally retarded, Goldstein and Seigle (1958) considered characteristics of the retarded. They made specific reference to frustration proneness, self devaluation, limited ability to deal with abstractions, and retarded language development, each of which may apply to the socially disadvantaged as well.

Because of their outward appearances of normalcy, the mentally retarded often are expected to perform at levels higher than their capabilities. This is particularly true when retarded children are placed in regular classes and expected to compete with normal children. In trying to adapt to a normal environment, they will probably be frustrated. The socially disadvantaged also face failure and frustration in typical school settings that are oriented toward middle class values (Deutsch, 1963).

In being subjected to frustration and failure in and out of school situations, the retarded reflect the opinions of parents, peers, and teachers, and acquire a defeatist attitude consistent in persons with a poor self image. The disadvantaged are reported to possess a poor self image also, as expressed in their feelings of inadequacy in school settings (Dreger, 1960; Keller, 1963; Silberman, 1964). Riessman (1962) reports:

> Although the deprived person in many ways desires education, he is inhibited by a number of significant factors. For one thing, he does not think he has a good chance of getting much education. This feeling forces his

educational aspirations to remain more at the wish or fantasy level, rather than making them a definite concrete intention [p. 14].

Mentally retarded children have a limited ability to conceptualize and appear to learn more adequately when faced with tasks involving concrete objects. Textbooks for special educators are replete with emphases on stressing the concrete approach with these children. This is consistent with Piaget's theories on intellectual functioning which, in essence, state that until the age of 10 to 12, or the early teens (CA for normal children), a child's thought processes are such that it is difficult for him to transmit concepts or operate on hypothetical propositions. It is also consistent with Bruner's hierarchy of cognitive development in which each child passes through three stages. He emphasizes, as does Piaget, that each stage must be satisfactorily handled before thought at the next stage can be successfully accomplished.

Bruner's first stage is that of enactive representation, which is a mode of representing past events through motor responses; the second stage is that of iconic representation, which summarizes events through images; and the third stage is symbolic representation, the mode of abstract language.

Riessman (1962) stresses the need for a concrete approach with the deprived, as the following list by Riessman of learning characteristics shows:

1. Physical and visual rather than aural.
2. Content centered rather than form centered.
3. Externally oriented rather than introspective.
4. Problem centered rather than abstract centered.
5. Inductive rather than deductive thought processes.
6. Spatial rather than temporal.
7. Slow, careful, patient, persevering (in areas of importance), rather than quiet, clever, facile, flexible.

Researchers who have been concerned with speech and language development have found that the deprived are influenced by mental retardation and by social and economic status (Beckey, 1942; Irwin, 1948; Bernstein, 1961; Deutsch, 1965; and others). This is partly due to their inability to conceptualize and to the unstimulating home environments from which they come. Language development appears to be correlated with mental age: the lower the IQ, the later the child begins to talk. As both groups are promoted from grade to grade, they continue to fall farther behind their middle class peers on all language variables measured.

Several writers and researchers (Riessman, 1962; Eells and Havighurst, 1951) have pointed out, however, that disadvantaged populations often possess quite complex language skills, although the language form may not be verbal nor the symbols consistent with those of the middle class language.

Orem (1967) listed several characteristics of many deprived children in traditional schools. It is apparent that all but a few characteristics would apply to the mentally retarded. They are:

1. Lack of concentration on a school task.
2. School dropout.
3. Need for external controls, rewards.
4. Slow cognitively; difficulty in abstracting.
5. Unwilling to risk failure.
6. Poor speech; functionally illiterate.
7. Habitually do not finish a job.
8. Poor work habits.
9. Impulsive acting out or passivity, withdrawal.
10. Noisy, shouting, or apathetic.
11. Escape into gangs.
12. Destructiveness.
13. Disrespect for law and rights of others.
14. Poor manners, lack of the social graces.
15. Emotionally disturbed.

Gordon and Wilkerson (1966) report that socially disadvantaged children lack readiness, motivation, and a learning oriented system. "Symbolic rewards and postponements of gratification appear to have little value as motivations of achievement [p. 16]." Bloom, Davis, and Hess (1965) report: "He [the disadvantaged] values things and activities which are concrete and which have immediate and tangible rewards [p. 21]." Do these not describe the retarded also?

With more than half of the mentally retarded coming from socially disadvantaged homes, it would be expected that these two groups would have many characteristics and needs in common. Persons working with the mentally retarded or the disadvantaged must guard against applying generalities to individuals and should be on the lookout for changes in intellectual functioning or submerged talents.

If certain practices of education are successful with the retarded, then these practices should receive a thorough investigation by educators who plan programs for the culturally deprived.

Concepts and Procedures with the Retarded that May Prove Helpful with the Disadvantaged

In examining the characteristics of the mentally retarded and the disadvantaged, it is apparent that these two populations have many similarities. Although special education for the mentally retarded faces many critical issues and has many difficult problems to solve, there are still a large number of concepts and procedures employed which have a solid basis for existence and have a high probability of being successful if employed with the disadvantaged. The concepts and practices to be discussed are not used exclusively with the mentally retarded. They are employed with normal children and children with other exceptionalities. The difference, however, is in the matter of emphasis. Some if not all of the procedures to be discussed are already being employed somewhere with disadvantaged children. Perhaps it would be worth examining the frequency, extent, and degree of success with which these procedures are being employed. The concepts and procedures to be discussed are as follows: diagnosis, specially trained teachers, special curriculum, methodology, preschool programs, parent orientation and support, special educational materials, and guidance and counseling.

Diagnosis. United States schools attempt to provide relatively universal educational opportunities for all children. As a result, the emphasis has been on providing education for the masses rather than for the individual. In writing about the problems of slow learners, Johnson (1963) states:

> Instruction is all too often thought of solely in reference to content, with specific methods of instruction designed or selected on the basis of the general learning characteristics of the large middle section of the class [p. 59].

In this program of mass education, retarded and disadvantaged children fail to keep up with the normal group. Without an adequate diagnosis to determine the cause and characteristics of each child's learning problems, appropriate measures cannot be taken to alleviate them. Diagnosis should provide the teacher with the kind of information needed to plan an effective educational program immediately, thus saving time spent in trial and error. The diagnosis would include a thorough psychological, physical, social, personality, and educational assessment.

The psychological or psychometric examination would be given to determine the level of mental ability of the child. Although there are many discrepancies associated with intelligence tests currently in use, a skilled psychologist often can detect when measures are inadequate and allow for these inadequacies in writing up his evaluation. Hopefully, tests developed in the future will reduce, if not eliminate, the errors in diagnosis.

A thorough medical examination should be given to determine the need for medical treatment or the existence of a physical problem which blocks maximum learning. Functional mental retardation occurs far more often than it should because undetected physical ailments prevent the senses from operating at top efficiency. A child whose distorted vision or hearing is allowed to go uncorrected may perform far below his potential. When deviations are abnormal, a more complete physical and medical examination often is essential to the diagnosis so that the nature of the problem can be understood in its totality. When specific problems are detected, referrals should be made to the appropriate medical specialists.

A social and personality study of the child and the family is needed for the purpose of determining personality and social needs. A social case history

> . . . provides the information necessary to determine how well he understands his environment and his position in it, how effectively he is adjusting to his environment and the contribution important persons in his environment (such as his parents) are making to his total adjustment [Johnson, 1967, p. 645].

Some information should be obtained about the child's interests or his motivation system. This information is invaluable in understanding the individual's behavior and provides the teacher with clues that will aid in planning experiences that will contribute to healthy emotional and social growth and adjustment.

An educational evaluation is required to determine the degree of educational retardation and possible educational disabilities. Standard achievement tests when properly administered, scored, and interpreted can accomplish three objectives (Johnson, 1967). They have the following purposes:

1. To measure a child's present achievement level.
2. To measure the amount of growth an individual has made during a restricted period of time.
3. To determine specific problems he may be having in the acquisition of a specific academic skill.

Recently developed diagnostic tools, such as the Illinois Test of Psycholinguistic Abilities and various tests of perception, can provide assistance to teachers in diagnosing children whose performance falls far short of that expected. This clinical approach is becoming more and more prevalent in classes for the mentally retarded and should be a valuable approach with culturally deprived children.

Specially Trained Teachers. Teachers of atypical children require special training above that required for normal children. Teachers of disadvantaged children, like teachers of the retarded, should receive training in the nature and needs of the children with whom they work. Through practice teaching with these children, these teachers should demonstrate that they have the competency and interest to continue working with children living in deprived areas. Staffing of special classes for the retarded is similar in nature to the problem of staffing slum area schools because there are more vacancies than qualified persons available to fill them. Recruitment tactics must be employed that secure those teachers who are qualified and interested in working with groups of children with special problems. Hiring high school seniors and college freshmen and sophomores as camp counselors or teacher aides for the mentally retarded has been an effective method of recruiting special education teacher candidates. Similar techniques can and are being employed in summer preschool programs with the socially disadvantaged.

Gordon and Wilkerson (1966) report on an experimental project conducted at Hunter College in New York City that demonstrates the effectiveness of placing preservice trainees in difficult schools for a period of supervised practice teaching. The trainees not only developed competence in dealing with disadvantaged pupils but also were encouraged to choose schools in disadvantaged areas for teaching.

Special Curriculum. The standard curricula of our schools have been dismal failures in holding the attention of children deviating from the norm. The traditional curriculum is oriented toward college placement and is of little relevance to the child who is not college bound. In a study of high school dropouts, Havighurst, Bowman, Liddle, Matthews, and Pierce (1962) report: "It is clear that low intelligence and low socio-economic status are important factors in dropping out of school, but it is also clear that these factors alone are not adequate explanations [p. 21]." In interviews, the boys and girls were asked why they dropped out of school. They gave the following major reasons:

1. Negative experiences and negative attitudes in school—47 percent.
2. Poor social adjustment—18 percent.
3. Preference or need for work—16 percent.
4. Marriage—9 percent.
5. Other—8 percent.

To rectify this terrible loss, we must develop curricula that relate to the everyday needs of the child and give the child skills that he can apply in his home immediately. The curriculum should be developmental in nature and should reflect the background and environment of the children. Development in the emotional, social, physical, and achievement areas must be considered, as well as in the intellectual area, to insure that instruction is efficient and effective in holding the interest of the child.

There are many concepts and practices in special classes for the mentally retarded that could apply to the disadvantaged. Although these curriculum practices will be discussed individually, it is well to remember that they overlap when employed in the classroom. Curriculum topics under discussion include stimulating intellectual growth, language development, self concept, motor and perceptual development, social skills, family living, training for wise use of leisure time, and vocational education.

Stimulating Intellectual Growth. As described earlier, there has been a resurgence of interest in the possibility of training the intellect. Generally the early intellectual development of the child takes place in the home, but when it fails to stimulate intellect, the school must step in to nurture the highest possible mental development.

There have been a few reports of successful attempts to evaluate the effect of special training on the modification of intelligence of retarded children. Most noteworthy of the studies are those of Kephart

(1939), Skeels and Dye (1939), Skeels (1942), and Kirk (1958). In evaluating these studies, Kirk (1964) stated: "These results lend support to the proposition that educational opportunities at an early age can accelerate the rate of mental growth of children reared in psycho-socially deprived homes . . . [p. 70]." He points out that for several reasons there are few studies on the effects of educational procedures on the educability of intelligence of mentally retarded children.

> One reason has been the prejudice against the possibility of developing intelligence through educational procedures. Another reason is related to the length of time needed to produce reliable results. A third reason is that factors of control, attrition, and reliability of measurement tend to discourage experimenters from launching a controlled longitudinal experiment of an educational nature [p. 72].

There are also several studies on environmental changes with socially disadvantaged children which resulted in significant increases in IQ scores: Lee, (1961); Davis, (1963); and Klineberg, (1963). Brazziel and Terrell (1962) subjected a group of Tennessee Negro children to a six week enrichment program consisting of reading readiness training, vocabulary building, verbal reasoning, training in perceptual discrimination, and training in following directions, together with counseling sessions with the parents. They reported significant gains in intelligence and reading readiness scores.

The younger a child is, the more effective a program of intellectual stimulation can be. Preschool and primary grade classes systematically must provide for the intellectual development of the child through reading to the child, games, dramatic play, concrete materials (toys, blocks, etc.), art, and music. Older children can benefit from a program that challenges their thought processes also. Games and tasks that challenge their memory and problem solving ability can prove beneficial.

Language Development. Because of the strong relationship between intellectual functioning and language ability, it is imperative that children who are deficient in language ability receive training specifically emphasizing this area. Developing language ability requires emphasis on speech, an increase in vocabulary, growth in concepts, and the ability to use complete sentences.

Kirk and Johnson (1951) list several successful activities used for language development with the retarded such as:

1. Encouraging free expression related to immediate experiences such as in the home, health, individual activities, etc.
2. Having the child carry out instructions in any activity, and encouraging him to tell about it.
3. Through the use of books and pictures, encouraging children to express themselves with increased sentencing and vocabulary.
4. Utilizing trips and excursions as a basis for language experiences.
5. Telling stories by teacher and children.
6. Finger games, rhymes, and riddles as good language aids for these children, providing them with a favorite pastime.
7. Specific classification and fluency in remembering words by asking children to respond to specific questions.

Regardless of the activity, the teacher should seek opportunities for developing vocabulary, meaning, concepts, and some slang. Other helpful techniques are story telling, dramatics, singing, the use of audiovisual equipment, and role playing activities.

Recently, devices have been produced to assist in the development of language. One such device is the Peabody Language Development Kit which is being developed for various educational levels. At the present time, the first two levels have been completed and are reported to be quite successful in classes for retarded and disadvantaged children.

Self Concept. Retarded and disadvantaged children, who generally have been subjected to failure during their school experiences and in many instances in the home and community, are very much in need of a series of successes to build up their self image. They have to look upon themselves as being worthwhile individuals. It is important that children learn who they are and see their relationship to their family and the community.

In a preschool program for socially disadvantaged retardates, Spicker, Hodges, and McCandless (1966) attributed their inadequate physical self concepts to the absence of mirrors and pictures in the home. Several children could not guess that it was themselves being described in a "guess who" game but were able to guess the names of other children. They also had difficulty in recognizing themselves from photographs, but were able to identify classmates. To correct this situation, children traced each other's full length outline on paper; then, while observing himself in a full length mirror, each child filled in the appropriate parts and colored them. Each child was also given a number of opportunities to describe his appearance to the class.

In the Demonstration Guidance Project (which later developed into the Higher Horizons Project), the following aspects of class life for the improvement of self image were stressed by Riessman (1962).

1. A variety of instruments was used, including a nonverbal IQ test to assess the ability of the students, to make certain that abilities were not overlooked.
2. Pictures of outstanding persons of the same ethnic groups as the children were hung in the classrooms to instill motivation.
3. Special, small remedial reading classes met daily to improve upon reading skills.
4. Reinforcement, in the form of awards, was given for a number of books read.

Motor and Perceptual Development. As the number of programs for the retarded multiply, the importance of strenuous physical education is assuming a definite role as an aid to the intellectual, physical, and social development of retardates. Studies comparing the motor ability or physical fitness of the retarded with that of normal children have been unanimous in finding that the retarded function far below the level of normal children. (Francis and Rarick, 1960; Howe, 1959; Thurstone, 1959; Sengstock, 1966). In the past, we have been trying to prepare retardates for manual labor without doing much to make them fit for such jobs. In studies by Howe (1957), Oliver (1958), and Corder (1966), it was found that retardates improve at a rate similar to that of normals in physical fitness when given strenuous fitness training. Significant gains were also found in academic achievement and IQ scores in the latter two studies. Fortunately, we have seen a strong trend supported by the American Association for Health, Physical Education and Recreation, the Kennedy Foundation, and the National Association for Retarded Children to improve physical education in special classes throughout the country.

The same emphasis can be equally as valuable in classes for the disadvantaged. There are several good reasons to support this practice: (a) the lower the child declines on the social ladder, the lower the child tends to rate on indexes of health and fitness—for example, the disadvantaged tend to be shorter and lighter and do less well on tests of physical fitness (Bloom, Hess, and Davis, 1965); (b) physical training produces rapid reinforcement so necessary in motivating these students, thus improving their self image; (c) it is a desirable way of expending nervous energy and aggressive feelings; and (d) it adds variety to the school day by interrupting sedentary activities.

Strauss and Lehtinen (1947), who performed much creditable work in education with brain injured retardates, have described the function of perception in human development and its relation to learning as being the basic key to learning discrimination. Therefore, it should receive a place in the curriculum for all children, with particular emphasis in programs for children who come from homes that are only minimally stimulating.

Perceptual development is stimulated by use of a wide variety of games, toys, and other objects for manipulation. Plenty of opportunity should be provided for developing each of the sense modalities: vision, hearing, touch, taste, smell, and balance. Many of the games and devices developed at the Laradon Hall School in Denver, Colorado, for trainable mentally retarded children and described by Frankel, Happ, and Smith (1967) are excellent in serving this purpose, as are some of the materials developed by Montessori.

Social and Vocational Skills. The retarded and the disadvantaged generally suffer from a lack of training and experience in desirable social skills. Whereas the average child from a middle class home learns through instruction and from the example of adults and older siblings in their home environment in an informal manner, the retarded and disadvantaged require specific school instruction. School time should be reserved for instruction in good grooming habits, in how to get along with others, and in developing good relations with authority figures.

The home environments of these children (retarded and disadvantaged) generally provide poor examples of desirable family living. Hence, these children should acquire knowledge and attitudes about the family as a desirable social institution. The students should learn about the roles and responsibilities of respective family members, about how they can help one another, about family planning and sex education, and about the family's responsibilities to the community.

In terms of satisfactory social adjustment for adults, educators of the retarded have found that the problem of living with leisure time is almost as critical as the problem of getting and holding a job. With an ever increasing variety of recreational activities being made available, the retarded and the disadvantaged need training in how to use their leisure time wisely. We must expand their interests to areas that are wholesome and perhaps even educational. They should be exposed to recreational activities that involve not only the family and peer groups of varying sizes, but also the individual engaged in solitary activity.

Many national, state, and community public and private agencies are taking an active interest in sponsoring recreational activities for handicapped and disadvantaged children and adults. Class instruction should include information about community agencies and other resources that are available for recreational activities.

Vocational or occupational guidance and training at the secondary school level is a necessity for the mentally retarded. It may also be necessary for many of the disadvantaged, who will not be attending college. Secondary vocational education programs have received a great deal of emphasis in the last decade. During the junior high school period and the freshman and sophomore years of high school, mentally retarded children have engaged in inschool work study programs and have received instruction on vocational information, proper behavior on the job, etc. As these children move into their junior and senior years of high school, they participate in out of school work experiences. Kirk and Johnson (1951) state that the task of the teacher regarding vocational education is fourfold:

1. He must teach job information, especially dealing with the larger vocational areas.
2. He must bring the individual in his group to an understanding of their abilities and limitations in relation to various job classifications and requirements.
3. He must organize a school program that will develop the general skills needed in future occupations.
4. He must aid the guidance counselor and the rehabilitation counselor to understand the children, their special problems, and their abilities in relation to job placement.

Instruction in vocational education should be in general skills or major vocational areas. Except in a few isolated instances, the retarded hold or lose their jobs on the basis of character traits rather than the performance of specific manual skills required on the job. Also, it is impossible to predict all of the particular skills required in the performance of a job in any industry because of technical changes which occur overnight. Those with a background in basic skills that have been applied in many ways to various situations will be far more adaptable in achieving vocational adjustment.

Methodology

There are numerous methods of instruction which have proven to be successful in special classes for the mentally retarded which might also successfully be applied to the culturally deprived. Some of these are the use of concrete materials, operant conditioning, field trips, and classes with a low pupil teacher ratio.

Use of Concrete Materials. Because mentally retarded and disadvantaged children have difficulty in conceptualizing, it is necessary that instruction begin with the manipulation of concrete objects. In Bruner's hierarchy of cognitive development, this would mean instruction of the enactive and iconic levels of representation, or "learning by doing." Through systematic sequential methods of instruction, the child should gradually be led to bridge the gap from concrete manipulation to abstract manipulation (or Bruner's third stage of symbolic representation) in a competent fashion.

Operant Conditioning. Both groups of children do not respond to long term goals or delayed gratification. Therefore, it is imperative to employ methods of instruction such as operant conditioning which offer immediate rewards. Reports of research employing reinforcement techniques with retarded children have been so successful that its devotees have all but acquired the enthusiasm of a cult. Not only have these methods been helpful in eliminating undesirable behavioral mannerisms and improving academic learning, but also they have been instrumental in changing attitudes.

Field Trips. Both retarded and disadvantaged children tend to spend all or nearly all of their time in their own neighborhoods. They do not have the beneficial experiences that most middle class children have of receiving a variety of educational offerings by the community at large. Hence the field trip is a valuable method of increasing self awareness of the child and enriching his educational experience. The field trip can be a springboard for a host of activities in such areas as art, music, motor, and academic skills. For urban children, a trip to interesting places in the city, i.e., museums, historic sites, sporting events, and fire and police departments is motivating. For rural children, a trip to a city, dinner in a restaurant, or a trip to a college or university will be enriching. In programs designed to prepare adolescents for the world of work, trips to factories or offices can be helpful to assist in job selection and to develop healthy work attitudes. A special effort should be made to bring some parents along on trips. This enables the parent to discuss school activities with the child in a favorable light. When it is difficult to take the child into the community, the next best thing is to bring the community to the child in the form of guest speakers and displays.

Smaller Classes. Because socially disadvantaged children have a disproportionally high rate of problems associated with learning, it is necessary for teachers of these children to have a smaller number of children with which to work than does the teacher in the regular class. This procedure has been employed since the inception of special classes for the mentally retarded. Although there is little research which specifies the most effective ratio of teachers to pupils, it is a commonly accepted adage that children with more problems generally require more teacher time. Teacher shortages, particularly in slum area schools, make the special education practice of employing nonprofessional teacher aides attractive.

Preschool Training

In the longitudinal study by Kirk (1958) mentioned previously, preschool training was provided for young retarded children. Kirk concluded that children from psychosocially deprived homes benefited developmentally from a preschool opportunity. Since this study has been published, many preschool programs have been started throughout the country. Some of them are supported by PL 89-10 grants, and others, through support of local ARC groups. Connor and Talbot (1964) developed a curriculum for preschool mentally retarded children. Many day care centers and preschool programs have adopted a number of the suggestions provided in this curriculum.

During the past few years, hundreds of summer preschool programs have been instituted for disadvantaged children. Clearly these classes are an attempt to prevent educational retardation by engaging the children in activities designed to compensate for the deprivation that some children experience in their home and communities. Most of these programs are financed by Project Headstart of the Office of Economic Opportunity and are based on the following or similar underlying assumptions:

1. That these children have not had many of the experiences usually associated with readiness for the traditional demands of kindergarten and primary school.

2. That this aspect of their handicap can be modified by exposure to a special curriculum.
3. That the principal goal of this special curriculum should be learning how to learn.

The curriculum in these classes is very similar to that of classes for the retarded. Among the specific techniques and procedures utilized are:

1. Parent orientation and support.
2. Structured social and physical environment conducive to directed learning.
3. Perceptual training.
4. Development of attitudes and habits directed toward learning.
5. Improving self concept.

Data already collected are not consistent, and much research is still required. Many pieces of research on the efficacy of preschool programs are unequivocal in their positive findings, yet other studies report negligible gains when followup evaluations are made six months to a year later. In most instances negligible findings were primarily attributed to the public school kindergarten classes which failed to take advantage of the progress already made by those children who had attended preschool. Also it must be said that only a small percentage of the teachers working in preschool programs are professionally trained to work in this area. Colleges and universities must develop quality preschool teacher training programs.

Erdman and Olson (1966) suggest the possible development of a new type of preschool primary organization for educable mentally retarded and culturally deprived children. They report that differential diagnosis at an early age is extremely difficult; consequently, urban school systems may need to develop diagnostic type classes for their children. Since objectives, curriculum, and methodology for both groups are similar, they could be housed together in the form of ungraded primary classes.

Parent Orientation and Support

Because mentally retarded and socially deprived children have more problems in adapting to society than do normal children, it is essential that parent contact be made, that they be counseled, and that their assistance be solicited. In studies with retarded children by Peck and

Stephens (1960) and with culturally deprived children by Milner (1951), there are strong indications that the parents' willingness to answer questions, and to praise, attend, and generally converse was reflected in the child's ability to relate to other adults. McCandless (1964) reports on an unpublished study by Irwin (1960) and a study by Dawes (1942) which tend to support the value of parents' reading aloud to young children. Clearly it is the job of the teacher to inform the parent of how to motivate and stimulate his child.

In working with parents, it is important to emphasize those aspects that are of immediate relevance to the children's aptitudes and attitudes concerning school achievement. Regardless of whether the child is retarded, socially deprived, or both, the teacher can be helpful to the parent in furnishing information on the instrumental steps involved in helping the child to achieve scholastic, social, and vocational success and in promoting greater feelings of self worth and worth of her child.

Special Educational Materials

The mentally retarded have always suffered from a lack of educational materials designed for their motivational needs and learning characteristics. Because competitive publishing and school supply houses avoid the extra research necessary to prepare specialized materials for special classes, the mentally retarded frequently have resorted to using textbooks, workbooks, and materials that were designed for normal children. More often than not, these materials are both outdated and not suited for use by the retarded. A similar situation exists in classes for the disadvantaged. Basic readers, for example, are geared for children with middle class backgrounds and values. As a result, the people and events portrayed in them arouse little identification or curiosity. Fortunately, through federal support of programs, publishers are taking an interest in developing more appropriate material. In the meantime, however, the teacher of socially disadvantaged children, like the teacher of retarded children, must spend much of her time preparing materials which possess the qualities of high interest and appropriate work levels for her students.

In addition to general reading materials, teachers need special programed instructional aids, manipulative materials, and audiovisual materials. The newly formed Instructional Materials Centers for Handicapped Children and Youth can probably be of invaluable assistance in locating and developing appropriate educational materials.

Guidance and Counseling

Each group of children that deviates from the norm has specific and unique problems requiring counseling and guidance beyond those required by the average child. These problems are related to the peculiar abilities and disabilities of the individual, and because of their deviations from the norm, it is more difficult for them to achieve success in and out of school. The mentally retarded, for example, have acute problems and find additional difficulties in profiting from guidance and counseling services because they lack a normal amount of intellect. Their equipment with which to adjust to the world is not as good as that of the normal child. Guidance counseling services for the mentally retarded and the disadvantaged are primarily valuable in developing attitudes and habits that will insure the individual's adjustment in the adult work world. A counseling program aids the children in developing their levels of aspiration in harmony with their ability level, thus making it possible for them to adjust realistically to the demands of life out of school.

Conclusion

By making compensatory education available to the socially disadvantaged at an early age, there is great hope that the number of children entering special classes for the retarded during their intermediate or high school years will be reduced considerably. The form these early classes would take, producing the most beneficial results, has not yet been determined, but the alternatives must be investigated. Perhaps both groups should be segregated for instruction from preschool on, or as Erdman and Olson (1966) suggest, a new type diagnostic teaching ungraded primary class for the disadvantaged and the retarded might be attempted. Perhaps a different kind of program not yet thought of may be the answer.

In looking at the various characteristics of the retarded and the socially disadvantaged, we have noticed many similarities between the two. If one accepts the adage of analyzing a child's development, teaching him according to his present level of accomplishment, and leading him in the direction of desirable goals, then the retarded and the deprived would be starting their formal education at approximately the same level. Because of these similarities, many of the practices employed in the early education of the mentally retarded might successfully be employed in the education of the culturally deprived.

Erdman and Olson (1966) have pointed out that the retarded and the disadvantaged require training to develop skills to think at the level of Bruner's enactive and iconic method of representation. For the retarded, this might be sufficient to develop their capacities, but those deprived of normal or above normal intelligence are capable of functioning at a higher level if given a proper program of education. They are capable of functioning at Bruner's third level, that of symbolic representation, if exercises and activities are provided to help bridge the gap between the various representational levels. In essence, we are saying that these concepts and procedures from special education for the retarded which offer a high probability of being successful should be borrowed. We must add, however, other concepts and procedures, perhaps used with other exceptional children, or perhaps developed from scratch, to help the deprived reach their potential as happy, contributing citizens.

References

Beckey, R. E. A study of certain factors related to retardation of speech. *Journal of Speech Disorders*, 1942, **7**, 233-249.

Bernstein, B. Social class and linguistic development: a theory of social learning. In H. H. Halsey, J. Floud, and C. Anderson (Editors), *Education, economy and society*. Glencoe, Illinois: The Free Press, 1961. Pp. 288-314.

Birch, H. G. (Editor). *Brain damage in children: the biological and social aspects*. Baltimore, Maryland: Williams and Wilkins, 1964.

Bloom, B. S., Davis, A., and Hess, R. *Compensatory education for cultural deprivation*. New York: Holt, Rinehart and Winston, 1965.

Brazziel, W. F., and Terrell, Mary. An experiment in the development of readiness in a culturally disadvantaged group of first grade children. *Journal of Negro Education*, 1962, **31**, 4-7.

Bruner, J. S. The course of cognitive growth. *The American Psychologist*, 1964, **19**, 1-5.

Connor, Frances P., and Talbot, Mabel L. *An experimental curriculum for young mentally retarded children*. New York: Teachers College, Columbia University, 1964.

Corder, W. O. Effects of physical education on the intellectual, physical, and social development of educable mentally retarded boys. *Exceptional Children*, 1966, **32**, 357-366.

Cruickshank, W. M., Bentzen, F. A., Ratzeburg, F. H., and Tannhauser, M. *A teaching method for brain-injured and hyperactive children*. Syracuse, New York: University Press, 1961.

Dawe, H. G. A study of the effect of an educational program upon language development and related mental functions in young children. *Journal of Experimental Education*, 1942, **11**, 200-209.

Davis, Allison. The future education of children from low socio-economic groups. In E. Stanaey (Editor), *New dimensions for educational progress*. Bloomington, Indiana: Phi Delta Kappa, 1963. Pp. 27-54.

Delacato, C. H. *The diagnosis and treatment of speech and reading problems*. Chicago, Illinois: Charles C Thomas, 1963.

Deutsch, M. The disadvantaged child and the learning process. In A. Passow (Editor), *Education in depressed areas*. New York: Bureau of Publications, Teachers College, Columbia University, 1963. Pp. 163-179.

Duncan, J. *The education of the ordinary child*. New York: Ronald Press, 1943.

Dreger, R. M., and Miller, K. S. Comparative psychological studies of Negroes and whites in the United States. *Psychological Bulletin*, 1960, **57**, 361-402.

Eells, D., and Havighurst, R. J. *Intelligence and cultural difference*. Chicago, Illinois: University of Chicago Press, 1951.

Erdman, R. L., and Olson, J. L. Relationships between educational programs for the mentally retarded and the culturally deprived. *Mental Retardation Abstracts*, 1966, **3**, 311-318.

Francie, R. J., and Rarick, L. G. *Motor characteristics of the mentally retarded*. US Office of Education Cooperative Research Project Report Number 1. Washington: Department of Health, Education, and Welfare, 1960.

Frostig, Marianne, and Horne, D. *The Frostig program for the development of visual perception*. Chicago, Illinois: Follett, 1964.

Gallagher, J. J. *Tutoring of brain-injured mentally retarded children*. Springfield, Illinois: Charles C Thomas, 1960.

Getman, G. N. *How to develop your child's intelligence*. Luverne, Minnesota: Getman Publications, 1962.

Getman, G. N. *The physiology of readiness*. Minneapolis, Minnesota: P.A.S.S., 1964.

Goldstein, H., and Seigle, Dorothy. *A curriculum guide for teachers of the educable mentally handicapped*. Curricular Series B-3, Number 12. Springfield, Illinois: Illinois Department of Public Instruction, 1958.

Gordon, W., and Wilkerson, A. D. *Compensatory education for the disadvantaged*. New York: College Entrance Examination Board, 1966.

Haeusserman, Else. *Developmental potential of preschool children: an evaluation of intellectual, sensory and emotional functioning*. New York: Grune and Stratton, 1958.

Havighurst, R. J., Bowman, P. H., Liddle, G. P., Matthews, C. V., and Pierce, J. V. *Growing up in River City*. New York: John Wiley and Sons, 1962.

Havighurst, R. J. *The public schools of Chicago.* Chicago, Illinois: The City Board of Education, 1964.

Howe, C. E. A comparison of motor skill of mentally retarded and normal children. *Exceptional Children,* 1959, **25**, 353-354.

Hungerford, R., DeProspo, C., and Rosenzweig, L. *Philosophy of occupational education.* New York: The Association for the New York City Teachers of Special Education, 1948.

Ingram, Christine P. *Education of the slow learning child.* Yonkers, New York: World Book, 1935.

Itard, J. M. G. *The wild boy of Aveyron.* New York: Appleton-Century-Crofts, 1932.

Irwin, O. C. Infant speech: the effect of family occupational status and of age on use of sound types. *Journal of Speech and Hearing* Disorders, 1948, **13**, 224-226.

Johnson, G. O. *Education for the slow learners.* Englewood Cliffs, New Jersey: Prentice-Hall, 1963.

Johnson, G. O. Guidance for exceptional children. In W. M. Cruickshank and G. O. Johnson (Editors), *Education of exceptional children and youth.* Englewood Cliffs, New Jersey: Prentice-Hall, 1967. Pp. 631-669.

Keller, S. The social world of the urban slum child: some early findings. *American Journal of Orthopsychiatry,* 1963, **33**, 823-831.

Kephart, N. C. The effect of a highly specialized program upon the IQ in high grade mentally deficient boys. *Proceedings of the American Association on Mental Deficiency,* 1939, **44**, 216-221.

Kephart, N. C. *The slow learner in the classroom.* Columbus, Ohio: Charles E Merrill, 1960.

Kirk, S. A. *Early education of the mentally retarded.* Urbana, Illinois: University of Illinois Press, 1958.

Kirk, S. A. Research in education. In H. Stevens and R. Heber (Editors), *Mental retardation: a review of research.* Chicago, Illinois: University of Chicago Press, 1964. Pp. 57-99.

Kirk, S. A., and Johnson, G. O. *Educating the retarded child.* Cambridge, Massachusetts: Houghton Mifflin, 1951.

Kirk, S. A., and Weiner, Bluma B. The Onondaga census—fact or antifact. *Exceptional Children,* 1959, **25**, 226-231.

Klineberg, O. Negro-white differences in intelligence test performance: a new look at an old problem. *American Psychologist,* 1963, **18**, 198-203.

Lee, E. S. Negro intelligence and selective migration. In J. J. Jenkins and D. S. Patterson (Editors), *Studies in individual differences.* New York: Appleton-Century Crofts, 1961. Pp. 669-676.

McCandless, B. R. Environment and intellectual functioning. In H. A. Stevens and R. Heber (Editors), *Mental retardation: review of research.* Chicago, Illinois: University of Chicago Press, 1964. Pp. 175-213.

Milner, E. A study of the relationship between reading readiness in grade one school children and patterns of parent-child interaction. *Child Development,* 1951, **22**, 95-112.

Olson, J. L., Hahn, H. R., and Hermann, Anita. A psycholinguistic curriculum. *Mental Retardation,* 1965, **3**, 14-19.

Oliver, J. N. The effect of physical conditioning exercises and activities on the mental characteristics of educationally sub-normal boys. *British Journal of Educational Psychology,* 1958, **28**, 755-765.

Orem, R. C. *Montessori for the disadvantaged.* New York: G. P. Putnam and Sons, 1967.

Peck, J. R., and Stephens, W. B. A study of the relationship between the attitudes and behavior of parents and that of their mentally defective child. *American Journal of Mental Deficiency,* 1960, **64**, 839-844.

Riessman, F. *The culturally deprived child.* New York: Harper and Brothers, 1962.

Sengstock, Wayne L. Physical fittness of mentally retarded boys. *Research Quarterly,* 1966, **37**, 113-120.

Silberman, C. *Crisis in black and white.* New York: Vintage Books, 1964.

Skeels, H. M., and Dye, H. B. A study of the effects of differential stimulation. *Proceedings: American Association on Mental Deficiency,* 1939, **44**, 114-136.

Skeels, H. M. A study of the effects of differential stimulation on mentally retarded children: a follow-up report. *American Journal on Mental Deficiency,* 1942, **46**, 340-345.

Smith, J. O. Effects of a group language development program upon the psycholinguistic abilities of educable mental retardates. *Peabody College Special Education Research Monograph Series,* 1962, **1**.

Spicker, H. H., Hodges, W. L., and McCandless, B. R. A diagnostically based curriculum for psycho-socially deprived, preschool mentally retarded children: interim report. *Exceptional Children,* 1966, **33**, 215-220.

Strauss, A. A., and Kephart, N. C. *Psychopathology and education of the brain-injured child. Volume II. Progress in theory and clinic.* New York: Grune and Stratton, 1955.

Strauss, A. A., and Lehtinen, L. E. *Psychopathology and education of the brain-injured child.* New York: Grune and Stratton, 1947.

Thurstone, Thelma G. *An evaluation of educating mentally handicapped children in special classes and in regular classes.* Washington: US Office of Education, 1959.

Wirtz, M. A. Increased concern for disadvantaged children and youth: implications for the educator of the mentally retarded. *Education and Training of the Mentally Retarded,* 1966, **1**, 8-10.

Wiseman, D. E. A classroom procedure for identifying and remediating language problems. *Mental Retardation,* 1965, **3**, 20-24.

CHAPTER 7: CONTRIBUTIONS OF PROGRAMS FOR CHILDREN WITH ORTHOPEDIC HANDICAPS OR HEALTH IMPAIRMENTS

DOROTHY B. CARR

For the purposes of this paper, the disadvantaged will be defined as an economically impoverished group that is perennially overrepresented among the educational failures in our schools. It is not easy to generalize about the way these pupils can be helped by programs and services for children with orthopedic handicaps or with health impairments. Problems, needs, programs, and services differ in rural and urban areas of our nation. A different incidence of handicapping conditions and of emphasis on them will result from different definitions and from the degree of social acceptance or rejection of the handicapped. Variable factors that influence the size and type of organization of such programs include the distribution of the handicapped pupil population, regulations established by state legislatures and boards of education, the availability of qualified personnel, the budget, and capabilities of transportation services. Due to these variations, some children are taught in segregated programs and classes for the impaired, while others remain integrated in regular classrooms. It is important to note that there is a dangerous misconception that the physical presence of a child in a regular classroom is synonymous with integration into the activities of that classroom.

Special education programs for the orthopedically handicapped may be considered minority programs; that is to say, they serve a minority of the school population, in contrast to the larger nonhandicapped elementary and secondary school programs. Thus, program planners for them share many of the same struggles experienced by minority groups. Moreover, a recent survey in the Los Angeles City Schools (1966) indicated that 60 percent of the handicapped children served by the Special Education Branch resided in areas classified as disadvantaged, according to the criteria established under the Elementary and Secondary Education Act of 1965. In some schools for the orthopedically handicapped and health impaired, as many as 85 percent of the pupil population resided in such impoverished areas. There appears to be a significant relationship between children with orthopedic handicaps or with health impairments and their economic status. This apparent relationship should make it possible to find many problems of common concern.

An added concern for children with such handicaps is that, even in the disadvantaged communities in which they live, they are rejected by their neighborhood peers. Hence, they truly may be called "doubly disadvantaged." Furthermore, if such children are so unfortunate as to have multiple handicapping conditions, such as mental retardation, in conjunction with their physical impairment, they also are rejected by their nonretarded classmates who have handicaps; and, thus, they may realistically be considered "multiply disadvantaged."

During the last two decades, there has not been a notable expansion of pupil enrollment in programs for the orthopedically handicapped and health impaired, but there have been changes in the composition of the pupil population in such programs. There has been a marked reduction of many conditions, such as poliomyelitis, rickets, clubfoot, osteomyelitis, and tuberculosis. Much of this reduction in handicapping conditions may be credited to advances in medical research and public education. On the other hand, these same advances in medical science have saved many babies who would not have lived otherwise, and because their lives were saved, the youngsters live on with multiply handicapping conditions. There are many more multiply handicapped youngsters in special education programs for the orthopedically handicapped and health impaired, and the number is increasing steadily. A question arises as to how many of these multiply handicapping conditions might have been prevented with prenatal care, a service of which too few women residing in disadvantaged areas avail themselves. Youngsters are now more frequently in programs for the physically handicapped because of accidental injuries. Pupils benefiting from special education programs are more mobile now than in the past. They are confined in hospitals for shorter periods of time. Research has indicated that, generally speaking, children with orthopedic handicaps, or those who have health impairments, tend to have a lowered intellectual functioning level. This may be due either to the greater frequency of central nervous system damage or to the fact that some pupils must be absent from school more frequently for medical services. Other limiting conditions may result from lower levels of general energy or restricted environmental opportunities. Significant, too, is the possibility that some of these pupils have limited levels of aspiration. It has been noted that pupils who are in special education programs for the physically handicapped for short term periods differ characteristically from those attending for long term periods. This, of course, is probably related to the severity of their handicaps. Research further indicates that children with orthopedic handicaps, or those who have health impairments, are frequently retarded socially and emotionally. This is especially significant in their adjustment potential with peers. It would be logical to conclude that the rejection such children experience in their own neighborhoods contributes to their adjustment problems.

It is encouraging that special educators recognize that there is not just one type of program for these children, but several types. Their effort is to meet the unique needs of each child, rather than to force him to fit into an established, "prepackaged" school program, with exclusion as the only alternative choice. More and more, the public schools are expected to admit almost all children who apply for enrollment. There are several ways in which children with handicaps participate in educational programs—via regular classes, through special units with schools, in separate buildings, in hospitals and convalescent homes, by home instruction, and through teleclasses. The teleclass program is provided by a two way, conference type telephone unit that permits full time instruction by a teacher. It is possible to teach a whole class of homebound or hospitalized children at one time, in small groups within the class, or individually, or to transfer some to group activities with tape recorders or phonographs, in situations in which the students may work either independently or through group discussion. Increased provisions for multiply handicapping conditions of children are made in some larger school districts through the use of itinerant teachers trained to assist both the teacher and the pupil who may have an additional visual or aural impairment.

Different types of instructional programs are indicated for young handicapped children who are striving for habilitation and admission into regular primary classrooms than are needed for the chronically ill child or the child with more severe physical handicaps. This would be true also for the child who has a progressive or degenerative physical condition. Special facilities are needed for most programs designed to serve children with orthopedic handicaps or health impairment. School districts frequently provide modification of buildings and special furniture and equipment to meet such needs. To develop maximum independence and self adequacy, many districts provide personnel in physical therapy, occupational therapy, corrective physical education, counseling, speech therapy, school medical and orthopedic services, as well as the services of at least a part time school nurse, children's attendants, teacher aides, and teachers specially trained to work with the physically handicapped.

It is recognized that flexible instructional programs to develop self acceptance and social adequacy begin at the preschool level and continue through separate but articulated elementary and secondary school programs. The team approach is used to meet the needs of the individual pupil. Curriculum is based on the regular course of study that should be developed sequentially and is presented in small class groups to maintain and strengthen educational skills. The value of field trips is recognized and, when feasible, participation in school and community recreational opportunities is encouraged.

Dilemmas

Traditionally, there have been many problems and dilemmas of concern to special educators who are responsible for educating children with orthopedic handicaps and with health impairments. Many of these issues are of equal concern to those who plan programs for the disadvantaged. These dilemmas include such questions as:

1. Is a humanitarian approach or a scientific approach more effective with children in the instructional program?
2. Should educators limit their responsibility to the educational program of the child, or should they be concerned with his total needs?
3. Is it better to group children homogeneously or heterogeneously?
4. Should teachers teach to the academic strengths of pupils, or to their weaknesses?
5. Is it necessary to know the cause of the deficiency, or does it suffice to treat the symptom?
6. Can psychologists truly predict the innate ability of the child, through the testing process, and do such findings significantly establish limitations for the instructional program; or is the child the product of interaction with his environment, in which case his learning potential has more of a capacity for change?
7. Should children be instructed in categorical programs, or are there common threads, such as learning disabilities, that are of equal concern to many categories of special education?

In moving instructional programs forward, a point of view is usually taken on each of these dilemmas. It is not always necessary that a dichotomy exist. Often, there is value in providing both types of services to different pupils or for the same pupil.

Trends

There have been some promising trends in the education of children with orthopedic handicaps and those with health impairments. Because so many children who have physical handicaps are also multiply disadvantaged, many of the following trends also may be of interest to programs for the disadvantaged.

With the help of a competent interdisciplinary team, some larger and forward looking special education programs are providing differential diagnoses centers to aid new pupils and youngsters who are not having satisfactory school experiences. In addition, many educators are now accepting children with handicaps "where they are" when they enroll in school, and then help them move through the essential developmental learning skills at a pace and in a manner that will be most beneficial to each child. Every opportunity is offered to enrich limited experiential backgrounds. For example, field trips to everyday community activities, such as supermarkets, pet shops, and parks are recommended.

Several school districts are using nonprofessional personnel in these programs. The extra help, under the immediate supervision of a qualified certificated teacher, provides opportunity for improved services to children. Such nonprofessional personnel may come from many sources. They may be high school graduates who are beginning part time junior college work. Some are high school dropouts from disadvantaged areas. Others may be graduate students training in special education who work part time while enrolled in late afternoon classes. Some districts also have organized two year junior college programs to offer promotional opportunities in the training of such personnel. Actual contact with children with physical handicaps is one of the best means for recruiting personnel. It is interesting to note that, once a person has taken the two year training course to qualify as a teacher aide, he frequently returns to college for his bachelor's degree and teaching credentials to become a teacher of the physically handicapped.

The use of trained volunteers has also proven to be a helpful source for increasing the availability of capable help for such programs. Volunteer programs should be coordinated by a volunteer outside the school, so that the burden does not fall upon the school administrator. Provision for substitutes and commitment of the volunteers to a regular schedule are essential. Training and followup conference programs can be arranged under the auspices of adult education led by a qualified, experienced teacher who is sensitive to the significance of good human relations.

There are many ways of making provisions for leisure time and recreational activities. Several schools offer scouting and similar youth activity programs. Camping opportunities can be made available for the handicapped, ranging from day camps to two week residential camp programs.

Another noteworthy community agency sponsored program is the United Cerebral Palsy's educational program for youngsters from eighteen months to three years of age. Children who participate in such programs benefit greatly; especially, if, upon leaving, they enter good preschool programs that are articulated with well planned primary levels programs.

A matter of concern to educators of children with physical handicaps is the involvement of many community agencies in the provision of services for the handicapped. It is essential to coordinate these allied services and to make provision for an interdisciplinary team approach to meet the varied needs of the orthopedically handicapped. Such a coordinated approach reduces gaps or duplications in services, provides better communication between the agencies, and offers the opportunity to meet adequately the secondary needs of the handicapped. There is a changing point of view that parents should have the right to seek services for their handicapped child at whatever public or private agencies they deem most appropriate. Because of this, the patterns established by existing public agencies previously assigned such responsibilities may need to be restudied. Effective coordination of public and private agency services in the community thus becomes imperative.

Parent involvement is an asset to programs for the orthopedically handicapped and health impaired. There appears to be a pattern of parent interest that is greatest at the preschool age level and that diminishes the further the child progresses in school. Efforts should be made to capitalize upon this interest of parents of young children. Parent education programs that discuss child rearing practices and common concerns and experiences are especially fruitful for both the child and his family with regard to the interaction of the child and his home environment during the early years. Some parent education programs may be conducted under the auspices of adult education, through a series of either day or evening classes, while other programs may be arranged on a classroom by classroom basis or through the school parent group. Recent experiences with parent education via teleclass equipment have been especially successful with hard to reach parents who are reluctant to come to school or who have transportation difficulties or too many young children to supervise.

In some districts, activities are planned for the post high school student through classes sponsored by adult education and through high schools for the handicapped in their regular scheduled reunions and "fun nights." The provision of activity programs for post high school students with physical handicaps should be a major concern.

Many schools are planning some form of occupational training and/or prevocational training programs, on campus and/or in cooperation with community sheltered workshops, via contract arrangements. The assessment opportunities offered and the pupil motivation observed in such programs are encouraging.

The increased emphasis upon language development and improvement in perceptual motor skills is a valuable addition to the instructional program for these children with physical handicaps. The program offers game situations to lower grades and fosters development of listening skills and correct speech in children. The program also strengthens reading and writing skills. Low ability in reading is correlated with low general academic achievement. The identification and remediation of perceptual motor deficiencies are also correlated with success in the reading program. In addition to improved academic achievement, growth is noted in the student's physical education and recreation skills on the playground, the means through which boys, especially, gain their status with peers at the elementary school level. A youngster with poor coordination, who has confused laterality and/or directionality, soon develops a devalued self image, and the effects of this are soon noted in his academic progress. It is heartening to see teachers concerned about such deficiencies and actively taking steps to remedy them.

Another experimental project is the use of programed instruction to help young boys who feel inadequate in reading programs because of the more rapid academic progress shown by girls. Programed instruction also impersonalizes the instruction for boys who have not identified favorably with women teachers. Simplified language labs are also needed for children who need to learn English as a second language.

Because so many children with physical handicaps qualify for federal funds under the Elementary and Secondary Education Act, some school districts have acquired funds for supplementary programs for the physically handicapped. Special individual and group counseling services have become available through federal funds. The importance of group counseling has been overlooked too long. School community coordinators who serve as combination social workers and public relations personnel also have made significant contributions to such programs.

In the area of inservice education, one school district has developed a master teacher-consultant team plan. The team travels from school to school, rotating members of the team personnel to offer short, well planned workshops for three or more teachers at a time, in such varied subjects as academics, music, art, and language development. While one consultant leads the workshop, the classes of the three teachers are instructed by the other three consultants who provide a demonstration lesson in each room. On the second day of the visitation, the consultants work side by side with the teacher to help with teaching problems which have caused concern. Thus, teachers are oriented to the newest instructional materials about four times a year, during school time, with excellent provision made for their classes while they are benefiting from the inservice opportunity.

Through supplementary funds from state or federal sources, some school districts are offering workshops to administrators and supervisors, and, in some instances, to teachers in the areas of interpersonal relations and intrapersonal understandings. Insights gained through participation in such workshops have proved beneficial to professionals in carrying out their responsibilities.

Summary and Conclusions

This paper has presented patterns in the education of children with orthopedic handicaps or health impairments. It was noted that a large number of physically handicapped children reside in neighborhoods classified as disadvantaged according to criteria established under the Elementary and Secondary Education Act of 1965. Many of these children can be considered doubly, or even triply, disadvantaged. Dilemmas faced by administrators, supervisors, and teachers in programs for the physically handicapped could be expected to be of common concern to personnel responsible for programs for the disadvantaged.

There are many needs for upgrading instructional programs and helping children who have health impairments or orthopedic handicaps. The prevention of handicapping conditions and the finding of new cases as early as possible, to allow early intervention, require more attention by responsible personnel.

Research is urgently needed as to what constitutes success for a handicapped student. How does one describe a successful handicapped student? Additional research is needed in followup studies of graduate high school students with physical handicaps. Such studies have implications for planning and upgrading instructional programs. Though some data are available in this area, much more is required. Information is also needed regarding the characteristics of the handicapped child; how he relates to his family, how he uses his leisure time, and what amount of medical services he receives. Inservice programs have to be planned to help regular school administrators more effectively conduct special education programs in their schools for children with physical handicaps. A system of regular evaluation of instructional programs in the district, the schools, and the classrooms can be most helpful. The development of the Education Research Information Centers, and of satellite stations to beam excellent educational programs to all children, are anxiously awaited by personnel responsible for programs for children with physical handicaps. To provide emergency service to the families of the physically handicapped, communities need to promote the establishment of more foster homes, as well as short term community living center facilities for children with physical handicaps. A data bank that could receive and retrieve information about these youngsters with physical handicaps on a regional basis could provide more extensive information and help prevent duplication of services.

A perennial problem in discussing the topic of this paper is the very broad potential scope of the topic and the lack of common agreement as to who constitute the disadvantaged. The literature and interviews reveal that the viewpoint from which the disadvantaged are identified varies depending on whether one is an educator, a psychologist, a sociologist, or someone primarily interested in the civil rights or economic aspects of the problem. Similarly, great variation of programs and services were indicated under the generalized identification of children with orthopedic handicaps, or with health impairments. There is no homogeneous group of such children with physical handicaps.

Trends mentioned that would interest persons responsible for programs for the disadvantaged include:

1. Differential diagnosis centers.
2. Educational provisions for *all* children.
3. Use of nonprofessional personnel.
4. Use of trained volunteers.
5. Leisure time and recreational activity programs.
6. Community sponsored programs for youngsters 18 months to 3 years of age.
7. Coordination of community agencies offering allied services to children with physical handicaps and the use of an interdisciplinary approach.
8. Post high school provisions.
9. Occupational and prevocational training programs.
10. Programs for developing and strengthening language and perceptual motor skills.
11. Programed instruction.
12. The teaching of English as a second language.
13. Federally funded programs.
14. On the job inservice training for teachers.
15. Workshops for educators on intrapersonal understandings and interpersonal relations.

Additional recommendations of this paper would stress: (a) a continued effort toward more effective teaching, (b) an increased interest in motivation and commitment on the part of both teachers and students, (c) the planning of the instructional program so that handicapped youngsters will have a sequential series of successful experiences, and (d) the teacher's awareness of her pupil's potentialities.

The key to the success of the instructional program is still the interrelationship of a dedicated, capable teacher with the pupils and the leadership and support of the administrator. Educators must help citizens with special problems to make a meaningful and satisfying contribution to the society in which they live. The schools in our country cannot afford to do less.

Reference

Los Angeles City Schools. *We serve the exceptional child.* (Revised) Publication Number 691. Los Angeles: Los Angeles City Schools, Office of the Deputy Superintendent of Instruction, Special Education Branch, 1966.

Suggested Bibliography

Carr, Dorothy B. Teleteaching—a new approach to teaching elementary and secondary homebound pupils. *Exceptional Children,* 1964, **31**, 118-126.

Cincinnati Public Schools. The slow learning program in the elementary and secondary schools. Curriculum Number 119. Cincinnati, Ohio: Cincinnati Public Schools, 1964.

Cruickshank, W. B., and Johnson, G. O. (Editors). *Education of exceptional children and youth.* (Second edition revised). Englewood Cliffs, New Jersey: Prentice-Hall, 1967.

Glasser, W. *Reality therapy, a new approach to psychiatry.* New York: Harper and Row, 1965.

Gordon, E. W., and Wilderson, D. A. *Compensatory education for the disadvantaged. Programs and practices: pre-school through college.* New York: College Entrance Examination Board, 1966.

Gore, Beatrice E., and Outland, R. W. *Educational programs for orthopedically handicapped children, including the cerebral palsied in California schools.* Sacramento, California: California State Department of Education, 1965.

Havighurst, R. J. *The public schools of Chicago. A survey for the Board of Education of the City of Chicago.* Chicago: The Board of Education of the City of Chicago, 1964.

Jones, G. W. Compensatory education for the disadvantaged. *NEA Journal,* 1967, **56**, 21-23.

Los Angeles City Schools, Office of the Superintendent. *Major report, special education study, 1960.* Los Angeles: Los Angeles City Schools, Office of the Superintendent, 1960.

Los Angeles City School Districts. *Elementary and secondary education act, Title I.* Los Angeles: Los Angeles City School, Office of the Deputy Superintendent of Instruction, Special Education Branch, 1966.

Riessman, F. *The culturally deprived child.* New York: Harper and Row, 1962.

Telford, C. W., and Sawrey, J. M. *The exceptional individual, psychological and educational aspects.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967.

Trout, L. We ain't unteachable . . . just unteached. *NEA Journal,* 1967, **56**, 24-26.

Van Doren, R. The Ford road school votes aye for the Teacher Corps. *NEA Journal,* 1967, **51**, 28-30.

Welfare Planning Council, Los Angeles Region. *The mental retardation survey of Los Angeles County, 1963-1965.* Los Angeles: Mental Retardation Joint Agencies Project, Welfare Planning Council.

Wilson, O. M. Rapport—basic ingredient for teaching. *NEA Journal,* 1967, **56**, 31-34.

Other Sources

Taped recordings of series of group counseling sessions. Widney High School for the Physically Handicapped, Los Angeles, California, 1967.

Taped recording of a series of five lectures by Frances Connor, Head, Department of Special Education, Teachers College, Columbia University. Presented at a state sponsored workshop for directors, administrators, and supervisors of programs for the orthopedically handicapped, Los Angeles, 1967.

Los Angeles City Schools. *Status report, 1965-66.* Los Angeles: Los Angeles City Schools; Deputy Superintendent of Instruction, Special Education Branch, 1966.

CHAPTER 8: CONTRIBUTIONS OF PROGRAMS FOR THE VISUALLY HANDICAPPED

SAMUEL C. ASHCROFT

The task of this paper is to indicate potential contributions to the education of children who are disadvantaged from the special education emphasis in vision. The paper has been organized to present some historical, philosophical, and legislative contributions; to suggest contributions in terms of media, materials, and methods; and to develop a rationale for concepts that are useful in approaching the education of children with visual impairments—concepts that would seem to have distinct merit for the education of children who are disadvantaged.

The major concern of special education has been and continues to be the emphasis on educational provisions for individual differences in young learners. As educators have become increasingly aware of and sensitive to the wide range of individual differences in children and the need to make educational adaptations to those differences, special education has had greater opportunity to make unique contributions to programs for the general population. The capabilities of special education to fulfill the need for adaptation to individual differences have accrued from the disability and exceptionality subareas under its generic umbrella. Vision is one of these areas. Its contributions are related to providing for a wide range of individual differences in visual efficiency and visual perceptual ability ranging from the absence of vision to near normal vision.

There are both positive and negative lessons to be learned from experience and research in the education of children with visual impairments. However, both lessons can make helpful contributions to the education of children who are disadvantaged. Some examples of each follow.

Since the education of individuals who were blind constituted an extreme or limiting case, efforts to educate blind individuals set useful precedents. If such severely handicapped people could be educated, they provided a model to others. Indeed, this example setting provides a paradoxically positive and negative contribution, for the work was fostered and spread by exhibition for fund raising and for soliciting legal and other types of support. Benefits accrued from some aspects of these public relations efforts, such as contributions to acceptance of the duty to educate all the children of all the people and the right of all to equal opportunity for education. However, negative effects resulted from resorting to spectacle and exploitative exhibition such as reinforcing the stereotype of unusual compensatory sensory abilities or talents.

This area of emphasis made significant contributions through pioneer work with multiply handicapped individuals, particularly those who are deaf and blind, by demonstrating the possibilities of educating even the most severely sensorially deprived children.

Early educational efforts for children who were visually handicapped were provided through the auspices of welfare agencies. This area of vision has made a significant contribution by removing the education of the handicapped from the jurisdiction of departments of welfare and assumed it as a responsibility of departments of education. This area also pioneered by early demonstrating the education in local public schools of children who were blind or partially seeing. Cincinnati undertook such efforts as early as 1905, and Chicago, Cleveland, New York, and Minneapolis followed suit thereafter. Farrell (1956) indicates,

> Even as the telephone was the result of Alexander Graham Bell's search for a hearing aid for his deaf wife, the typewriter is the outcome of research for a device for the blind. . . . another effort to find a medium of writing for the blind resulted in a convenience for the seeing . . . a hollow pen which could be filled with ink so heavy that, after writing and drying, it left a line sufficiently raised for the fingers to read . . . it became the modern fountain pen . . . a blind person, Richard Dufton, invented a so-called ball-point pen . . . .
>
> . . . Edison, when applying for a patent on his talking machine in 1877, predicted its use for the benefit of the blind. It was, however, many years before this evolved. Ironically, the first step was the use of Dictaphone records in early day classes for blind children in Cleveland and Minneapolis.
>
> Ear reading of recorded material really became practical for the blind through the development of the long playing disk. In this transition the American Foundation for the Blind blazed the trail [pp. 122-131].

Talking book records, which have long been provided "solely for the use of the blind," have recently been made available to all individuals who are physically handicapped. They can, of course, be a significant aid to the education of anyone, and would undoubtedly be of special assistance as a medium of instruction for children who are disadvantaged. Research and development efforts have been carried on for some time on compressed speech for rapid reading. This development, sometimes called time compression, enables a listener to audit recorded material in less time than was taken to produce it orally. Rates of aural reading resulting from compression of time up to 50 percent can be utilized without significant losses in comprehension, although the rates vary according to the nature and complexity of the subject matter; for example, literary material can be comprehended at more rapid rates than can scientific material. Since we know that speaking and listening vocabularies substantially exceed reading vocabularies, compressed speech for rapid aural reading could provide a medium for learning of substantial merit for children who are disadvantaged. Furthermore, the motivational value of records as compared to books (which are frequently shunned by children who are disadvantaged) should be of significance. And there is every reason to believe that there would be substantial transfer of training value to conventional print reading when deprived children have been desensitized regarding their aversion to school textbooks. Though it has yet to be tried as far as this writer knows, the suggestion has been made that braille might be a useful approach to reading for children with behavior disorders that include reading blocks. This might be tried with some children who are disadvantaged. Also, since we know that social and economic factors affect perception, it is possible that books in large type might be of value to children who are disadvantaged.

The education of children who are visually handicapped has been facilitated by the use of tangible aids, such as the abacus which helps make number and mathematics concepts more concrete. Geometric concept acquisition has been assisted by the use of three dimensional aids representing geometric forms. Scale models have been useful for a variety of purposes. As the education of children with visual impairment has been enhanced by the use of multisensory teaching aids, so the education of children who are disadvantaged may be improved by the use of audio-visual-tactual aids, some of which are available from the special education field of vision.

With respect to visual perception, experience with children who are visually handicapped affirms that vision is learned behavior and that an important aspect of seeing is putting meaning into visual stimuli. Individuals can learn to bring more and better meaning to visual stimuli and can learn to communicate in improved ways in terms of their visual perceptual experiences. The research of Barraga (1964) and others (Ashcroft, Halliday, and Barraga, 1966) attests to the fact that children, even with seriously impaired vision, can learn to interpret the distorted visual images that come through seriously defective end organs. Specialized instruction, motivation to function visually, and stimulation to communicate in visual terms are facilitative. Such research findings on visually handicapped children suggest a potentially significant approach to improved perception for children who are disadvantaged.

It would seem that what has been said of children who are visually handicapped could be said equally well of children who are disadvantaged. They are restricted in the range and variety of concepts, and in their ability to control the environment and themselves in relation to it (Lowenfeld, 1964). Starting with such a premise of restriction and deprivation, one might logically consider devising an educational program that would provide compensation for the missing experience and related concepts. For this purpose one might be impelled to enumerate and catalog those concepts which have been missed or in which the children have been deprived or limited so that plans could be made to compensate. In this frame of reference, compensatory education for both visually impaired and disadvantaged children seems appropriate.

However, the great magnitude of this task and the awesome responsibility entailed soon become apparent. How can one enumerate, catalog, and order concepts and then devise compensatory learning experiences for the massive deprivations accruing from either a seriously impoverished environment or a severe sensory impairment? It thus occurs to one who pursues this line of thinking to attempt to delimit the problem in some meaningful way. The task of identifying experiences of which these groups of children have been deprived might be reduced by limiting it to *crucial* concepts. Could some criteria be developed for making sound critical judgments regarding which experiences and related concepts are crucially essential, in contrast to those which might be considered desirable or even luxurious? If so, then the scope and difficulty of the task could be markedly reduced. For example, what kinds of experiences might be critical for optimum self realization, or the development of an adequate self concept for a child who is disadvantaged? What experiences might be critical to the development of effective human relations for a child who is visually handicapped? What essential concepts need to be built through experiences that will lead to economic efficiency for children who are growing up in seriously impoverished environments? Or, are there some indispensible experiences that should be provided for culturally or sensorially deprived children if they are to acquire the concepts they need in order to become effective citizens?

These questions could be cast somewhat more specifically in terms of conventional school curricula: What social studies, or science, or mathematics learnings are critical to the realization of the optimum potential and contribution of the individual? But, the search for crucial concepts and experiences is complicated by the absence of useful criteria, by constant social change, and by the ever increasing elaboration of complexity in today's society. The explosion of population, knowledge, and technology calls less for children and youth who have a storehouse of information and facts than it does for citizens who have skills and abilities to participate in populous settings; children who are learning how to learn and to acquire pertinent information; and children who can develop the potential to handle the machinery, equipment, and complex production problems of technological societies.

Thus, while the content issue, as it might be called, is important, there is a more important concern and a more fruitful approach. Though it neither solves nor does away with the struggle to find those content experiences that would be most important, it provides a more promising approach that can be effective. This approach places the emphasis on the development of attitudes, ideas, skills, and abilities—on the process of education rather than on content. It emphasizes discovery methods of instruction, the development of problem solving skills, the development of ability to analyze problems and to think about possible solutions—learning how to learn. It rejects the notion that the main task of education is to bottle quantums of knowledge to be poured into children.

One of the important goals in the education of children who are visually impaired is to change the attitudes of society toward this handicapped minority group. Such children almost universally meet an environmental constant of pity, deprecation, and the assumption of incompetence. Such environmental responses take a heavy toll by conditioning self regarding attitudes in negative ways.

Individuals who are visually impaired universally decry the negative attitudes they encounter. They frequently cite this as a greater problem than the handicap itself. For the purpose of changing this negative situation, many public relations efforts have been made to bring about more positive attitudes and greater acceptance. Films, radio spot announcements, employ the handicapped campaigns, and extensive public education programs have been carried on. A large array of personnel is employed to effect more accepting attitudes on the part of the public. If these endeavors have been successful at all, they are slow to accomplish their mission and a great deal remains to be done. Furthermore, the good that they do accomplish is frequently retarded by individuals who conform to the stereotype the public relations efforts were designed to change. One beggar on the streets, a welfare recipient, a groping traveler, or an indigent ne'er-do-well can undo countless efforts designed to create more positive attitudes. A parallel situation would seem to exist for the disadvantaged. But children who are visually handicapped can be assisted to develop competence and to acquire skills and abilities that enable them to elicit favorable and positive attitudes toward themselves. If they acquire such skills and abilities, they evoke positive responses from others, and the public is inclined to give them increased opportunities both to demonstrate their competence and to obtain additional opportunities to gain skill and ability. Thus enhanced, they elicit more and better attitudes, more chances to perform and learn, and thus still greater opportunities. An ascending spiral effect of competence-improvement-opportunity-enhancement-achievement-opportunity, etc., can replace the descending spiral of cumulative deprivation.

A concern in the area of vision which seems worth sharing in considering contributions to the area of the disadvantaged has to do with labeling handicapped individuals. There is, of course, general concern at present with categorical labels and their relevance to the educational provisions which can be made for subgroups of exceptional children. A marked trend is evident toward providing education in terms of learning disorders or learning disabilities rather than in terms of physical or mental characteristics of children classified categorically, as has been done traditionally. The vision area has experience with this problem growing out of the use of legal and medical criteria as opposed to more educationally relevant criteria.

Freidson (1965) has made an insightful analysis related to this problem in a chapter entitled "Disability as Social Deviance." Here he suggests that agencies concerned with the handicapped "... specify what personal attributes shall be called handicaps [p. 71]" and in so doing "... become responsible for drawing clearer lines than in fact exist in everyday life... [p. 83]." He points out that these agencies "... seek to identify who conforms to their specifications... [p. 71]" and "... may come to define people as deviant who would not ordinarily have been so defined [p. 83]." In attempting "... to gain access to those whom they call handicapped..." they may "... objectify deviance and reify diagnostic categories [p. 83]."

In developing this concept, Freidson (1965) goes on to say that the agency process may produce deviance

> . . . in that, by labeling the individual, it may organize the responses of the community toward him as a stereotyped deviant. Whereas those around him might never have attained any consensus about his behavior before, each responding to him according to his individual relationship, public labeling establishes a common focus for uniform community responses that carve out a role for him . . . [p. 85].

It seems a timely caution as programs are considered for disadvantaged individuals to take all possible steps to avoid the problems of labeling and the traditional categorical approach. Social and educational invention is needed to avoid these pitfalls, and if this invention can be found it can provide reflexive value to present special education categories by helping them recover from these problems.

This paper has attempted to indicate that the special education emphasis in vision has some significant contributions to make to the education of the disadvantaged. Some, but all too few, have their derivations in research which has eventuated in a sound body of knowledge. Some, but all too many, derive from trial and error experience in this field and must be presented only as precept and example.

The area of vision will profit as special education attempts to make a significant difference in the lives of disadvantaged children and youth.

References

Ashcroft, S. C., Halliday, Carol, and Barraga, Natalie. Effects of experimental teaching on the visual behavior of children educated as though they had no vision. Report to US Office of Education, Grant No. 32-52-0120-1034. Nashville, Tennessee: George Peabody College for Teachers, 1966. (Mimeo)

Barraga, Natalie. Increased visual behavior in low vision children. *Research Series Number 13*. New York: American Foundation for the Blind, 1964.

Farrell, G. *The story of blindness*. Cambridge, Massachusetts: Harvard University Press, 1956.

Freidson, E. Disability as social deviance. In M. B. Sussman (Editor), *Sociology and rehabilitation*. Washington: American Sociological Association, 1965. Pp. 71-99.

Lowenfeld, B. *Our blind children: growing and learning with them*. (Second Edition). Springfield, Illinois: Charles C Thomas, 1964.

CHAPTER 9: CONTRIBUTIONS OF SPEECH THERAPY

MAMIE J. JONES

In an ASHA article in 1964, the statement was made that "Speech therapists are clinicians who help the relatively small group of children with significantly handicapped disorders in language and/or speech [p. 190]." Traditionally, the role of the speech therapist has been that of remediation of organic and functional speech pathologies, not primarily cultural in origin. Today, however, the speech therapist is much in demand to work with the socially disadvantaged due to his preparation and the types of skills he can bring to this field.

> In recent years in the field of speech habilitation attention has turned to broader aspects of speech. The goal of speech therapy has been broadened to include improvement, not only of articulatory proficiency, but also skill in other communicative behavior [Lassers and Low, 1960, p. 14].

The importance of speech cannot be stressed too much and should not be underestimated in its relation to the adjustment and to the economic potential of the total individual. The socially disadvantaged child generally comes from a home where there is a paucity of verbal expression, with the majority of sounds given only to state basic needs in a concrete way, thus restricting thinking and inhibiting the development of the child's ability to comprehend.

Poor, inadequate, or handicapped speech is a part of a vicious circle. It acts as a deterrent to learning by keeping the child from participating in oral discussion; it acts as a deterrent to learning also by restricting his inner language; it acts as a deterrent to upgrading cultural standards; it can act as a deterrent to economic progress; and it can act as a deterrent in establishing interpersonal relationships.

> It's 'ow! and garn! that keep her in her place,
> Not her wretched clothes and dirty face. . . .

The Influence of Culture on Speech

The field of the speech handicapped has much to offer, not only for the socially disadvantaged speech defective child, but also in the development of educational programs for the socially disadvantaged. These disadvantaged children are not deprived of a culture, but the values of their culture often place them at a disadvantage in middle class society. There are as many individual deviants within the group as without, so it could be harmful to put only one label on them and to treat them all the same. Mark Twain has said that a nomenclatural tag tied to a human being can be like a tin can tied to a dog's tail.

Some parents are ambitious for their child to receive an education, others do not know how to help the child achieve, and still others are apathetic and unconcerned. However, one basic and important difference in cultures is that children from deprived homes lack the necessary readiness for verbal learning tasks in school. This is true in spite of the fact that here is a group of children who are talking: their vocabulary may be limited in size, and their speech may be unintelligible, but they *are* verbalizing and making sounds.

Speech may be said to be a way of talking—the sounds one hears are put together in some meaningful and purposeful fashion.

> The culturally privileged two-year-old uses a "reduced grammar." He leaves out words that he does not know and forms condensed sentences out of the words he does know how to handle. Thus, even though his sentences may consist of only two or three words, they are distinct words, and he is able to recombine them flexibly because they exist for him as independent entities. Disadvantaged children, on the other hand, often blend the words together with noises that take the place of words and inflections they do not know, so that all the words tend to become fused into a whole [Bereiter and Engelmann, 1966, pp. 35-36].

These have been labeled "giant words." "This leaves no distinctive units that can be recombined to generate new sentences. . . . The problem is to get the children to speak in words and to make statements that consist of words rather than amalgamated noises [Bereiter and Engelmann, 1966, pp. 36-37]."

> Lack of experience in the expository uses of language was sometimes revealed in the children's limited control over voice volume. These children typically showed two levels of volume: one a barely audible mumble used for replying to questions (a self-effacing 'keep out of trouble' tone of

voice), the other a loud shout used for commanding attention or voicing complaints and taunts. They lacked the middle range of volume ordinarily used for conveying information.

With culturally deprived children, it appears that speech develops as a form of social behavior that is more or less independent of motor behavior. This does not prevent the child from becoming proficient in motor skills, but it becomes a serious handicap when motor acts must be coupled with judgments, as in drawing, writing, and solving problems involving manipulation of objects. The culturally deprived child then shows much the same dissociation between language and action that has been observed in mentally retarded children.

As Luria and Vygotsky have explained, controlling one's actions through one's own words is a necessary step toward the mastery of dialectical reasoning, which in essence is controlling verbal behavior through an 'internal dialog' by means of which one may solve a problem, working a step at a time. This is a use of language quite different from its social uses, and the deficiencies of culturally deprived children in this use are most striking [Bereiter and Engelmann, 1966, pp. 38-39].

A Clinical Approach

In summarizing some of the oral communication needs of the socially disadvantaged, Bereiter and Engelmann found that they (a) lacked the necessary readiness for verbal learning in school, (b) experienced difficulty in speaking in words as units, (c) evidenced limited control over voice volume, and (c) exhibited dissociation between language, action, and thought.

The speech therapist, in translating these needs into skills which can be remediated, sees that:

1. Improvement in listening and auditory discrimination will assist the problem of readiness for verbal learning.
2. Attention to better articulation through the use of drills will aid in clarifying the concept of words.
3. Employing techniques of voice usage will produce control.
4. A language development program will strengthen both the encoding and the decoding processes, thus increasing word and thought association and usage.

Bereiter and Engelmann (1966) state that

> . . . the main stream of progress in education at all levels today seems to be in the direction of more careful analysis and constructive planning of curricula rather than toward mere intensification of effort [p. 56].

The speech therapist is a true clinician. He begins by making an assessment of the child's total speech and language pattern, analyzing both strengths and weaknesses and noting any structural deviation. Only after this information has been evaluated can he build a program of therapy for the child.

The clinician specifically evaluates the child's level of language and his ability to (a) listen and attend, (b) discriminate between noises and sounds, (c) produce voice, (d) articulate, and (e) use speech and voice purposefully as a tool of expression.

"A clinical approach provides the means for determining which children are most in need of speech therapy. It provides the basis for more effective planning of appropriate therapy approaches [Pronovost, 1966, p. 181]." The speech therapist determines the child's strengths and weaknesses in as many aspects of the total child as possible, and builds his program on the strengths while he attempts to alleviate the weaknesses. A clinical approach, similar to that used by the speech therapist, could serve as a basis for program planning for the socially disadvantaged. Even though there may be some common denominators on which to build such a program, this approach can be determined only after the children and their levels of performance have been evaluated individually. This type of clinical approach, it seems to the writer, is what Jones (1967) means when he says that we must identify the children and the specific nature of their disadvantage. His reasons for the failure of educators to help solve the problems of education for the deprived disadvantaged child are:

1. There is no adequate description of what the disadvantaged child *is*, and this calls for the serious attention of research workers in the behavioral sciences.
2. More research should be done on self attitudes and how they relate to motivation and achievement.
3. The positive characteristics or strengths of these young people should be identified so they can serve as a basis to develop a program of educational improvement, and serve as a starting point from which to work.
4. The principle advanced by Binet to strengthen certain aspects of the intellectual functions that appear to be less well developed than others directs our step by step efforts to alleviate the problems of the mentally, physically, or neurologically handicapped, and should be used with the socially disadvantaged.

The importance of speech and the contributions of many of the approaches used by the speech therapist are emphasized by Nash's (1967) statement:

> The majority of the children (disadvantaged) whom I teach have not learned to listen attentively, to verbalize adequately, or to follow verbal and written directions well; they fail to ask questions and often answer with bodily or vocal gestures [p. 71].

One of the first steps taken by a speech therapist in working with speech handicapped children is the teaching of listening skills.

> Pupils lacking normal preschool experience come to class equipped not only with inadequate vocabularies but with undeveloped listening skills. A child must learn the rewards that come from listening with selective attention [Community Action Program, 1965, p. 25].

The majority of disadvantaged children have learned to shut out noises. This has been essential in tolerating their environment which, in many instances, is noisy with the sounds of orders, yelling, television, and radio. Also, many of these children can tune out sound almost as efficiently as a person turns off a hearing aid. The auditory confusion of some children is similar to the visual confusion of a person looking at a figure ground problem and seeing all ground and no figure.

Deutsch noted that in many deprived homes little emphasis is placed on verbal interaction or directed or sustained speech. Much communication is nonverbal, and the verbal communication that exists is often terse, grammatically incorrect, and limited in structure and vocabulary. Having learned to shut noises out and having poor or limited verbal stimuli, the disadvantaged child will be poor in auditory discrimination (Raph, 1965).

Sarason states that the responsiveness both of the infant in the defective setting and of the deprived institutional child receives little reward, and people and objects possess no consistent stimulus value. Consequently, teaching the disadvantaged child how to listen is of utmost importance (Raph, 1965).

Developing Auditory Skills

Learning how to listen must precede listening in order to develop auditory discrimination, particularly for the child who has learned to shut sounds out. As an example, a variety of gross sounds—such as pencil tapping, whistles, bells, and horns—are introduced and identified. The speech therapist then asks the child to repeat the sounds. Other listening opportunities, such as the preparation of tapes to develop attention or listening skills, are given until the student has learned to attend and to imitate. In the next phase, the child is asked to discriminate between two whistles or two bells, etc. This leads to discrimination of the subtle differences between speech sounds, voice inflection, and rhythms (Community Action Program, 1965).

In their study, Clark and Richards (1966) note that the disadvantaged children exhibit significant deficiencies in auditory discrimination ability when compared with the nondisadvantaged group.

The results of Weiner's (1967) review of studies on auditory discrimination and articulation support the hypothesis of a link between auditory discrimination and articulation defects in the primary age group until about eight or nine years of age. The strongly positive findings are highly meaningful when the articulation defect is sizeable.

In 1964, Cynthia P. Deutsch investigated auditory discrimination as a factor in verbal behavior and reading achievement in a disadvantaged group of children. She postulated that these children, who had received little directed and sustained speech stimulation, might well be deficient in the discrimination and recognition of speech sounds; that they would also be relatively inattentive to auditory stimuli; and that they would have difficulty with any other skill primarily dependent on good auditory discrimination. Her study, employing poor readers and good readers from grades one, three, and five, indicated that the poor readers had poorer auditory discrimination and greater difficulty in shifting from one modality to another than did the good readers. Her results again confirm the importance of auditory discrimination and general auditory responsiveness for verbal performance and reading ability (Raph, 1965).

The speech therapist can devise activities and practices to promote improvement in listening and discrimination. Many experiences must be offered these socially disadvantaged children so they will

1. Become sensitive to the sounds about them, including the tones of musical instruments and the beauty of words and phrases.
2. Become aware of new and interesting words.
3. Listen and interpret the words and tones of voices of those around them.

4. Develop power in discriminating between language patterns and the sounds of words and word parts.
5. Listen critically to ideas presented to them (Gore and Koury, 1964).

These skills are essential for all types of communication, both oral and silent. The linguists such as Charles Fries preach the need for children to talk before they can learn to read. Attentive and discriminative listening is basic to developing oral language which, in turn, is basic to developing reading skill.

One of the major specific goals of speech therapy is the improvement of speech sound production. The birth cry and reflexive sounds are followed by babbling or vocal play. As pointed out by Van Riper (1939), most children of eight months have practiced in their babbling all the sounds which they will use later in life. The stage of socialized vocalization for getting attention, supporting rejection, and expressing demands begins about the fifth month. The child uses his primitive speech both to express himself and to modify the behavior of others. If for any reason these continuing experiences with vocal play are bypassed or reduced, the consequences will most likely be manifested in speech retardation, for the child is deprived of both the practice in muscular coordination necessary to good sound production and the reenforcement which brings about the development of the need for speech as a pleasurable, social invention. In working with the speech patterns of the socially disadvantaged, the therapist needs to relate the programing to this developmental sequence of speech.

Defects of articulation will account for by far the largest number of speech problems among the socially disadvantaged, even as among normal children. In general, the use of the auditory channel for the correction of defective sounds is the most appropriate method of procedure; however, all sensory avenues should be utilized for stimulation, motivation, and production. For example, one child would gladly make the "mmm" sound when permitted to turn the crank of a musical toy. Identification of sounds with concrete objects or things such as animals, toys, and games will make the learning of sounds meaningful and positive to these children.

Other techniques routinely used by the speech therapist include phonetic placement practiced with mirrors and diagrams; tongue exercises; nonsense syllables and simultaneous talking and writing to strengthen new sounds and aid in the transition to familiar words; and negative practice, checking devices, penalties set by the pupil, and drill to promote the consistent use of the new sound in spontaneous speech. All teaching proceeds from the simple to the complex. It follows that the oral phonetic skill developed in learning to produce sounds correctly in words will be reflected in the development of silent phonetic skill for the task of reading.

No amount of articulation drills will be effective in communication unless there is adequate and appropriate sound or voice to express the meaning one wants to convey. Consequently, the speech therapist pays particular attention to both voice quality and volume used. Exercises to improve the socially disadvantaged child's control over quality, pitch, inflection, and volume should be meaningful, utilizing drills realistic to the child's experiences and knowledge.

Language is complex and the set of symbols which is used to represent language is unique to a single culture. Consequently, the members of differing cultures experience difficulty in communicating because of these differences in their language symbols. The socially disadvantaged child needs to build a readiness for school language through experiences.

> . . . communication skill seen in children from disadvantaged neighborhoods is the use of gesture to convey meaning. They have always used their bodies and their hands to express themselves, probably more so than verbally communicative children. The linguists tell us that bodily movements, as well as the stressing of words and syllables, give meaning. Why not encourage this skill and combine it with listening and speaking, so that communication becomes easier and more interesting [Loretan and Umans, 1966, p. 17]?

The creative speech therapist will be able to translate this ability into activities to promote improvement in verbalization skills.

These experiences have to be real and they should first be built on nonverbal activities on which the verbal can be superimposed. There should be reception before expression, both in understanding and talking, as well as in reading and writing. The information going in should be enriched and include varying types of experiences before the emphasis is changed from decoding to encoding. The speech therapist who approaches a speech or language problem with an immediate corrective approach may be doing irremediable damage by blocking the child's verbal expression or by delaying the development of language and the child's desire to communicate. Language should not be put on a rote basis; a child should not become a parrot or a caller of words; rather, he should be taught to use sounds and words as meaningful expressions of his thoughts and feelings. Rote training is easy, but the scope of the task broadens when we think in terms of education for living.

The speech therapist must keep constantly in focus both the language development stage of the child and the set of symbols unique to his culture. If a child is functioning on a babbling stage, the therapist must take him from where he is and move on to the next developmental level when he indicates readiness. Care must be taken in transferring from his language to school language and in the carry-over into daily usage.

Role of the Speech Therapist

Following are some illustrations of the involvement of speech therapists with programs for the socially disadvantaged.

In one rural Southern school a speech therapist tests children for language skills and selective attention. Children lacking such development are given special training in the two chief aspects of oral communication, listening and production of speech. Classroom teachers and the speech therapist then cooperate in providing special experiences in hearing—and naming with specific words—common environmental sounds such as "horn" and "bell," "scratch" and "squeak." The sounds of words and the objects they identify are also emphasized: "pen" and "pencil," "hat" and "head," "hit" and "hop." A child's ears are enlivened upon hearing and identifying the sounds of someone coughing, someone sneezing, doors gently closed and doors slammed, the pounding of a hammer, the rasping of a saw, the scratch and squeal of chalk on a blackboard, and so forth. He also learns the interesting, identifiable sound of silence. It all adds up to skilled discrimination among a variety of gross sounds, the subtle differences among speech syllables, voice inflection, rhythms, training in auditory memory, and, most useful of all, vocabulary building.

The auditory training goes beyond simple disconnected experiences, such as dropping pencils and slamming doors. It includes listening to stories and making conversation, sometimes simple play acting and role playing. Also, "experience trips" are scheduled, during which the teacher emphasizes listening to sounds and learning names of things heard.

In the second and third grades use of tape recorders can be of great value. Children may listen to tapes, easily prepared by teachers, that illustrate basic phonetic sounds and the frequently subtle differences between them. This listening can be coordinated with writing exercises as children mark

> down appropriate letters or syllables to denote sounds. Many schools find it valuable to let children record their own speech, either in phonetic and word exercises or, better still, in play acting or ordinary conversation. While people usually tend to take for granted the clarity and correctness of their own speech, they are made objectively aware of their poor speech habits upon hearing themselves talk on tape. Children have shown remarkable improvement in speech development after hearing themselves recorded. As an added benefit, the excitement of speaking into a tape recorder and hearing one's self back has proved a great stimulant in encouraging verbal activity in nonverbal children [Community Action Program, 1965, pp. 25-26].

Lloyd (1965) states:

> We shall see within the next few years a new utilization of speech specialists in all schools in disadvantaged areas. We know that there is a close relation between speech problems and reading problems. The relation is such that one cannot readily solve the reading problem without first solving the speech problem.
>
> In New York City, we are participating in a most promising study: instead of reserving the services of speech therapists to the elimination of stuttering and other deep-rooted problems of individual children, we are also using these specialists in a pilot project to upgrade the general speech levels of whole classes. The professional reaction to this project has been so affirmative that additional positions have been requested so the project may be expanded—another breakthrough toward reading progress [p. 474].

The Atlanta City Schools utilized the skills of four speech therapists in their 1966 Headstart Program. Working under the direction of the Coordinator of Elementary Education, the therapists created six Language Development Units (one for each of the six weeks of the summer program), designed for the use of the classroom teacher. The overall goal of the units was to develop language concepts and abilities. Each unit contained all the necessary materials and teaching aids such as games, songs, stories, poems, suggestions for dramatic play, finger plays, and even the patterns for certain visual aids. Instructions in the use and timing of the lessons in each unit were given to the teachers by the therapists at inservice sessions. In addition, the therapists scheduled demonstration lessons in each classroom so the teachers had an opportunity to observe the speech specialist working with the children.

Each unit contained an evaluation sheet which elicited responses from the teachers on such aspects as length of lessons, motivational value of lessons, and integration with other curricular activities.

Teachers were encouraged to be creative and innovative in using the prepared material and in supplementing with their own original ideas.

The response of such encouragement produced excellent feedback which enhanced the lessons and provided motivation for children and therapists.

Speech therapists, in conducting their established speech correction services in the Atlanta City Schools, are constantly faced with the referral of many pupils who need the type of speech help which is generally described or designated as speech improvement. Included in this group are those children whose language and speech development are significantly retarded, but who cannot properly be diagnosed as speech defective. Also referred are many children who respond adequately to prescribed speech examinations but who do not perform consistently and spontaneously at this level. Whatever the description, these children are deficient in the skills necessary for good oral communication.

An educational television program in speech improvement is to be produced by the Atlanta City Schools as one way of teaching and/or improving the communication skills of this segment of the school enrollment. It is noteworthy here that administrators and faculties in the schools of substantial middle class populations and even overprivileged communities express a need for and an interest in such a television offering, as well as the schools designated as Title I Schools. Weekly 15 minute periods of intensive language and speech instruction will be the content of such a program. The lessons will be presented by a team of speech therapists. In addition, a teacher's manual or guide and inservice instruction for the classroom teacher will be an integral part of the total offering.

The lessons will be designed primarily for the kindergarten and first grade children, but it is expected that they will be useful also for classes for the younger educable mentally retarded students and all the primary grades of socially disadvantaged enrollments. The content of such a program will be designed with these goals in mind:

1. Teach listening skills.
2. Sharpen sound discrimination ability.
3. Lengthen auditory memory span.
4. Improve production of speech sounds.
5. Increase vocabularies.
6. Develop creative expression.

At the present time, the speech therapist is playing one of three roles in the education of the socially disadvantaged. In some instances, he is working only with the speech handicapped. In other instances, he is putting his skills to use in the area of speech improvement or language and speech development. In still other instances, he serves as a consultant in planning for educational innovations for the socially disadvantaged.

Perhaps there is a need to consider the development of another type of specialist who has more preparation for working with the language and speech development of preschool children. This seems to be the area in which we need to concentrate in order to work with the socially disadvantaged. In the 1930's there was talk about preparing this type of person to work in the elementary schools. The educational needs of the socially disadvantaged might challenge the profession to prepare another type of specialist, namely, one who is a cross between a child development specialist, a speech arts specialist, and a speech therapist. Whether this happens or not, it is certain that the concepts and skills used in the field of the speech handicapped are applicable in working with the socially disadvantaged and that they can aid in removing educational barriers for this segment of our population.

References

American Speech and Hearing Association. The speech clinician's role in the public school. *ASHA,* 1966, **6**, 189-191.

Bereiter, C., and Engelmann, S. *Teaching disadvantaged children in the preschool.* Engelwood Cliffs, New Jersey: Prentice-Hall, 1966.

Clark, Ann, and Richards, Charlotte. Auditory discrimination among economically disadvantaged and nondisadvantaged preschool children. *Exceptional Children,* 1966, **33**, 259-262.

Community Action Program. *Education, an answer to poverty.* Washington: OEO, 1965.

Gore, Lillian, and Koury, Rose. *Educating children in nursery schools and kindergartens.* Bulletin Number II. Washington: US Government Printing Office, 1964.

Jones, G. Compensatory education for the disadvantaged. *NEA Journal,* 1967, **56**, 21-23.

Lassers, L., and Low, G. *A study of the relative effectiveness of different approaches of speech training for mentally retarded children.* San Francisco, California: San Francisco State College, 1960. (mimeo).

Lloyd, Helene.What's ahead in reading for the disadvantaged? *The Reading Teacher,* 1965, **18**, 471-476.

Loretan, J., and Umans, Shelley. *Teaching the disadvantaged.* New York: Teachers College Press, Columbia University, 1966.

Nash, Rosa Lee. Teaching speech improvement to the disadvantaged. *The Speech Teacher*, 1967, **16**, 69-73.

Pronovost, W. Case selection in the schools: articulatory disorders. *ASHA*, 1966, **7**, 179-181.

Raph, Jane. Language development in the socially disadvantaged child. *Review of Educational Research*, 1965, **35**, 389-400.

Van Riper, C. *Speech correction: principles and methods.* New York: Prentice-Hall, 1939.

Weiner, P. Auditory discrimination and articulation. *Journal of Speech and Hearing Disorders*, 1967, **32**, 19-28.

APPENDIX

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